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GOTHIC ARCHITECTURE IN FRANCE, ENGLAND, AND ITALY

IN TWO VOLUMES

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GOTHIC ARCHITECTURE
IN
FRANCE, ENGLAND, AND ITALY

by

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B 935

Nec minimum meruere decus vestigia Graeca
Ausi deserere et celebrare domestica facta.
HOR. *Ars Poetica.*

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PREFACE

ALTHOUGH this book, which treats of a definite period of Post-Roman architecture, may be read independently, it is in fact a continuation of the history I published in 1913 of the Byzantine and Romanesque styles. I venture to hope that by the two books, taken in connexion with one another, the student may be helped to a consistent idea of mediaeval architecture, from its origin in the decay of Roman Art to its final stages in the 16th century. I have therefore not hesitated to refer frequently from this book to its predecessor. It is only by regarding the Art as a whole, tracing its career, following its steady and unbroken growth, and showing how it changed as the times changed, and kept pace with the progress of society that it can really be understood.

Gothic architecture attained its perfect development in France and England. The styles of the two countries, like yet unlike, overlapped and influenced one another, though they diverged ever more and more widely as time went on.

In Italy, though it was the cradle of Romanesque architecture from which Gothic sprang, Classic tradition was never lost, and Italian Gothic is Gothic with a difference. It has a charm of its own, depending perhaps

rather less on architectural form than on lovely material, supreme technique of execution, refinement and delicacy of ornament, and above all on splendour of colour.

I had intended an account of the Gothic art of the Low Countries and of Germany, but the present unhappy war has prevented a visit to those parts to revise my notes taken many years ago.

German Gothic however is of minor importance in the history of the Art. It was an imported and not an indigenous style, and therefore has less to teach us. In my first chapter I have said that Gothic is mainly a Teutonic art, because it arose and flourished in Northern and Eastern France, in England, and in certain parts of Italy, where the older population had the largest infusion of Teutonic blood—Goth, Frank, Burgundian and Norman in France, Saxon, Dane and Norman in England, Goth and Lombard in Italy, Norman in Sicily and Apulia. Not that the mere Teuton was the author of the new style, but it seems to be the fruit of grafting a Teutonic element on an older stock[1]. Except in music the Germans, who claim to be unmixed Teutons, have not excelled in the Arts, nor indeed in the Sciences, as a creative race. Their part has been not to originate, but by patient research, like the Saracens of Southern Italy and Spain, to pursue and enrich the discoveries of others. They have produced but two painters of the first rank, no great sculptor, for the admirable metal work of Peter Vischer is on a small scale, their Romanesque architecture was imported from Lombardy,

[1] If we are to believe Professor Sayce the Teutonic element in England has been over-estimated, and has long ago been absorbed; and we have now reverted to the Neolithic type. His theory however is not universally accepted.

and their Gothic borrowed rather late from France. Cologne Cathedral is based on Amiens, of which it exaggerates the weak points. The style suffers from megalomania, the sure sign of a weak artistic sensibility. Cologne Cathedral is an example of this, especially since its completion by the monstrous twin steeples at the West end.

At the same time German Gothic—especially that of South Germany—has its place in the history of the Art, and I regret its omission here.

The Arts found a happier soil in which to flourish in Belgium and Holland, the land of the Van Eycks, Memling, Rembrandt, Van Dyck and Rubens. The necessary omission of some account of the fine churches, splendid town-halls, and rich domestic work in Belgium is the more unfortunate, because many of the buildings have already been destroyed, and many more will in all likelihood suffer by the systematic brutality of German warfare. The Cloth-Hall at Ypres, perhaps the finest municipal building in Europe, and the Cathedral have been demolished for no conceivable military purpose, Louvain has been deliberately destroyed out of revenge, Arras and Aerschot are in ruins. Antwerp and Brussels will be in peril when they come within the range of battle, and the same danger will overtake Ghent and Bruges in the like event.

Similar disasters menace, and indeed have partly befallen the splendid architecture of North-Eastern France, the very flower of the style, which may already have become a thing of the past before these pages reach publication. Since the following chapters were written the Germans have battered the Cathedral of Reims, destroying much if not all of its inimitable sculpture:

Soissons is now undergoing the same treatment; Senlis has been damaged; Noyon, Laon, S. Quentin, and Tournay, which are still in possession of the enemy, will be exposed to the artillery of both friend and foe, and the Germans have promised that if they are turned out of Alsace and Lorraine they will not leave a building behind them.

Italy has now joined in the war, and the priceless treasures of her art are in danger. Bombs have already fallen near the Ducal Palace at Venice, and we may hear any day of their falling on S. Mark's. With the destruction of that Church, and that of S. Sophia which during the Balkan war the Turks threatened to blow up if they were driven from Constantinople, one splendid chapter of European architecture would be deleted.

Although it is only Germans who destroy works of art out of pure malevolence and spite it is difficult to see how any architecture is to survive modern methods of war. Buildings that have for hundreds of years looked down on changes of masters, and have survived battles and sieges during the Middle Ages and the Napoleonic campaigns, crumble into dust at the awful touch of modern engines of destruction. Unless wars should cease in all the world we may be the last who will see the wonders of ancient architecture.

Some reviews of my former two volumes complained that the accounts of the buildings referred to were not complete: others pointed out that something might have been said about certain buildings which were not mentioned at all. But it was not my purpose to write a guide-book on one hand, nor on the other to give an exhaustive catalogue of examples. My object then, and

now, has not been to describe a number of architectural works, but to give a rational view of the style as a whole. To supply the reader in fact with a skeleton scheme which if he properly understood it, might be filled up from his own observation. For that purpose I have chosen for description such buildings or parts of buildings as are typical of the history and development of the art, and have described them only so far as was needed to illustrate the subject matter. More than that would not only encumber the book, but also distract the attention of the reader from its object. As a further limitation I have confined the examples almost entirely to buildings that I have myself studied, and among them, where the opportunity offered, those with which I have happened to be professionally connected. To write about architecture at second-hand from the accounts of others is, I am convinced, of very little value. For this reason I say nothing of the highly interesting Gothic of Spain, for I have never been in that country, and can add nothing of my own to what Street and others have told us.

My drawings and notes have been made at various times during the last half century, but I have purposely revisited many of the buildings referred to, and have for the first time seen Sicily. So far as I could I have used original sketches for illustration rather than photographs, which besides making a dull book often convey a false idea of the subject. Several of the drawings in Sicily are by my son Basil; those by others are duly acknowledged.

My thanks are due to several friends who have kindly helped me: to Mr Gerald Horsley for the use of his fine drawing of the interior of Milan Cathedral; to Mr W. S. Weatherley for leave to reproduce his beautiful

drawings of the statuary at Westminster, and that of the Chapter house; to Mr Waller, the architect in charge of Gloucester Cathedral, for much information and for drawings of the construction of the choir; to Mr Francis Bond for the loan of his plate of the interior of King's College Chapel; to Professor Salinas of Palermo, deceased I am sorry to say since my visit, for much assistance there, and for the gift of some of his publications; also to Professor Orsi of Syracuse; to Professor Prior for Plate XCI of two statues at Wells; to the Science and Art department at South Kensington for the photographs from which Plate CLXVIII is taken; to the Editors of the *Builder* and the *Building News* for leave to reproduce several illustrations from those papers; and to my friend the Rev. George Horner for kindly reading the proofs.

Lastly I have to thank the Cambridge University Press for the extreme care that has been taken in the printing, illustration, and comely production of the book.

As in the former work I have appended at the end of the second volume a comparative table of dates of the principal buildings referred to in the text, with the addition of a few more. This I hope will be found instructive and useful to the student.

T. G. J.

EAGLE HOUSE,
WIMBLEDON.
Sept. 3, 1915.

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ERRATA

Vol. I. p. 96, line 8. *For* "where" *read* "when."
p. 179, line 6. *For* Portrail *read* Portail.
p. 189, note. *For* 1093 *read* 1096.
p. 238, line 28. *For* freize *read* frieze.
Vol. II. p. 334, line 7. *For* II. 304 *read* I. vi; II. 304.
line 29. *For* I. 2, 15 *read* I. vi, 2, 15.

CHAPTER I

DEFINITION OF GOTHIC

THE arts of Western Europe during the Middle Ages, that is to say, speaking roughly, from the 12th to the 16th century are generally known as Gothic; a title of rather vague and loose application.

It was invented at the revival of learning as a term of reproach. In literature compositions were called Gothic which were not Classic: that is to say such as did not follow the style of Greek and Latin authors. The term expressed the contempt of the enlightened men of the Renaissance for the works of their mediaeval predecessors; for their jingling rhymes, their unclassical Latinity, and their barbarous attempts in the vernacular tongue. In the Arts the disciples of Vitruvius and worshippers of the five orders branded as Gothic all the works of the preceding centuries during which the rules of Classic proportion and detail had been forgotten or ignored. The Goths who had overthrown the Western Empire, and founded kingdoms in Italy, Spain, and Gaul, were taken to typify all the Germanic tribes whose invasions and settlements had changed the face of Europe, and wiped out the civilization of the ancient world. The secondary meaning of the word "Gothic" in the *New English Dictionary* is "Teutonic or Germanic," and to

Gothic originally a synonym for barbarous

With Italians synonymous with German

the Italian the Gothic style was always the German style, *lo stile Tedesco.* Raffaelle writes to Pope Leo X that after the fall of Rome "the Germans (*i Tedeschi*) began to revive Art a little, but in their ornaments they were clumsy and very far from the fine manner of the Romans." Vasari and Palladio join in pouring contempt on those who admired the German style, the only excuse for which according to Raffaelle was that it originated in imitation of growing trees, whose interlacing boughs formed pointed arches, and that it was so far conformable to nature, and therefore not entirely despicable[1].

Raffaelle's idea of Gothic

Gothic a Teutonic art

The Italians were of course mistaken in supposing that the architecture we know as Gothic originated in Germany, but if we take Gothic in its wider sense as Teutonic it is a very good name for the style. For it was an art essentially of Northern origin, and grew up among those peoples who had the strongest strain of German blood. In France its cradle was in the North; in the old Royal Domain, where Goths and Franks had established their rule, and mingled their blood with that of the old Gallic inhabitants. "The North of France," says M. Guizot, "was essentially Germanic, the South essentially Roman." The Burgundians and Normans were Teutonic peoples; and in England, where the style had an equal development with that in France, the old Celtic race was almost lost among Saxon, Danish, and Norman conquerors who were all of Teutonic origin. In Germany itself the new art lingered longer in the Romanesque stage, which was itself a transition from Roman to Gothic architecture; but there too, in the end,

[1] He continues,—E benchè questa origine non sia in tutto da sprezzare pure è debole, perchè molto più reggerebbero le capanne fatte di travi incatenate, e poste ad uso di colonne, con li culmini e coprimenti come descrive Vitruvio, etc., etc.

Gothic attained a splendid development. These were the countries where Gothic architecture achieved its greatest triumphs, while in Southern France it made its way with difficulty, and was never fully accepted; and in Italy it assumed a special form which never quite broke with the traditional art of earlier ages.

Gothic less successful in Latin countries

We may therefore say that Gothic is mainly a Teutonic art, but it is difficult to define it more exactly. Who can say precisely when it began and when it ended? Its roots may be detected in buildings of the Romanesque period, and at the other end of its existence it melts imperceptibly into Neo-Classic. Is the Castle Hall at Oakham with its round arches and its pointed windows to be classed with Romanesque or with Gothic; and can the Elizabethan and Jacobean buildings at Oxford and Cambridge, at Longleat, Bramshill, Burleigh, and Kirby be reckoned as anything but Gothic, in spite of their Corinthian and Ionic shafts and capitals, or the five orders of Bodley's tower in the old schools at Oxford?

The Gothic period indefinite

To define it as Pointed Architecture would exclude such buildings as the Cathedrals at Lucca and Orvieto and many other churches in Italy which are nothing if not Gothic in spite of their round arches, as well as the Flamboyant buildings in France which abound in flattish elliptical heads to doors and windows, not to say a great deal of late Perpendicular and Tudor work in England.

Gothic not necessarily a pointed style

An American author, Mr Moore[1], who has written on the subject with useful particularity, would confine the name to what he calls "organic" constructions, where buildings are articulated into self-contained bays, each complete in itself and vaulted, and where every member of the vault is logically represented by its own individual

Attempt to confine name to vaulted buildings

[1] *Development and character of Gothic Architecture*, C. H. Moore.

support. From these premises he concludes that the only real and true Gothic is that of the churches in the Ile de France, of which the perfect example is Amiens Cathedral. But this is after all only a matter of words and names, and comes simply to this, that Gothic architecture gave more logical expression in some places than in others to those principles of construction which it obeys everywhere. To exclude from the style all English work except so much of Canterbury Cathedral as was built by a Frenchman, and perhaps the nave of Lincoln, is to mistake the part for the whole, the letter for the spirit, and to confine the conception of a great wave of artistic emotion to one only of its outward manifestations[1].

Vaulting not essential to Gothic

Vaulting played a great part,—perhaps the greatest, though certainly not the only part in developing Gothic architecture; but it will not do to define it as simply the expression of scientific vaulting. The Romans were masters of the art of vaulting long before; they used,—probably invented,—the cross-vault, and understood the concentration of thrusts on isolated points. It was from them, and from the Eastern Rome as well, that the Romanesque builders learned how to make their stone roofs, and they in their turn passed the art on to their Gothic successors, who improved and developed it in their own way, making in the end almost a new art of it. But it must be remembered that most of the problems of scientific vaulting had presented themselves before their

[1] Mr Moore writes that "wherever a framework maintained on the principle of thrust and counterthrust is wanting there we have not Gothic" (*op. cit.* p. 8). This would exclude the Ste Chapelle at Paris, and many more vaulted buildings where the thrust is taken directly by buttresses. Mr Porter does not accept Mr Moore's limitation of the term. *Medieval Architecture.* New York, 1909.

time, and had been partially at all events solved by their predecessors, though not so completely.

Vaulting not essential

Nor is it correct to regard vaulting as an essential feature of the style, however great its influence may have been on the structure of great churches. In England except on a grand scale it is exceptional; and yet if Westminster Hall with its stupendous timber covering, and the Fen churches with their glorious wooden roofs, and the splendid ceiling of the nave at St David's are not Gothic what are they? And what else can we call the countless village churches, gems of modest art, that stud our country far and wide, and constitute one of its greatest charms, though it is only here and there that they aspire to the dignity of a vaulted ceiling?

Domestic Gothic

Again if the test of Gothic is to be the logical expression of a vaulted construction what becomes of domestic architecture both here and abroad, in which vaulting certainly does not play an important part? Are the town-halls of Brussels, Ypres, and Louvain not Gothic, nor the Broletto of Como, the pontifical palace at Viterbo, or that of the popes at Avignon, or the ducal palace at Venice?

Gothic not a matter of form but of spirit

Still less is Gothic architecture, as it has appeared to the ordinary layman, a matter of quatrefoils and trefoils, of cusps and traceries, of crockets and finials, pinnacles and flying buttresses. These are but the accidents of the style, though no doubt they resulted naturally from the application of certain principles behind them. But they might all fly away and yet leave a Gothic building behind them. Many an old tithe barn of rough timber framework is as truly a piece of Gothic architecture as York Minster or Salisbury Cathedral.

If then none of these attempted definitions are really coextensive with the Gothic style of architecture, for a

building may be Gothic and yet have none of these characteristics, how are we to define it?

Gothic not a matter of form but of spirit

The true way of looking at Gothic art is to regard it not as a definite style bound by certain formulas—for it is infinitely various,—but rather as the expression of a certain temper, sentiment, and spirit which inspired the whole method of doing things during the Middle Ages in sculpture and painting as well as in architecture. It cannot be defined by any of its outward features, for they are variable, differing at different times and in different places. They are the outward expression of certain cardinal principles behind them, and though these principles are common to all good styles,—Gothic among them,—the result of applying them to the buildings of each age, country, and people will vary as the circumstances of that country, that age, and that people vary.

Gothic defined by principle not by form

To arrive at anything like an exact definition of Gothic architecture, therefore, we must look deeper than the mere outward phenomena by which we are accustomed to recognize it. To judge from them alone, no words could be framed to describe in common terms buildings so diverse as King's College Chapel and Salisbury Cathedral. Yet different as they are from one another they both result regularly and naturally from the application of the same principles under somewhat different circumstances. These principles were already at work in the Romanesque buildings of the preceding centuries, and it is to their consistent application that the development of the new style is due. The same principles which brought Romanesque architecture to birth out of the style of ancient Rome, when carried further and pushed to their logical consequences, produced the arts of the Middle Ages which we call Gothic. There was

Continuity of Romanesque and Gothic

no interruption, no break of continuity in development: the earlier style melted gradually, almost imperceptibly into the other; and afterwards one phase of Gothic passed gradually and naturally into the next. There is no break in the sequence from the latest Roman work at Spalato to the basilicas of Rome and Ravenna; from them to the nave of S. Ambrogio; to the great churches on the Rhine and the Conqueror's churches at Caen; to Vézelay, S. Albans, Winchester, and Durham; and onwards to Conrad's glorious choir, S. Denis, Sens, the work of the two Williams at Canterbury, the choir of Lincoln, Salisbury, Westminster, Paris, and Amiens.

Three grand principles have governed the development of Gothic architecture, as indeed they have that of every good style that the world has ever seen. Three general principles of architecture

The first is that the construction must be sound and good. Good building is the foundation of good architecture: no amount of design can make up for defect in this respect. This however does not take one beyond mere utility, and engineering, and does not touch the bounds of Art. 1. Solidity

The second great principle is that of Economy: by which I mean not merely thrift, though that comes in too, and the Gothic builders might have said with Pericles 2. Economy

φιλοκαλοῦμεν μετ' εὐτελείας,

but economy in the original sense of the word, that is to say a nice regard for arrangement and proportion, the due observance of circumstance of time and place, of the means available, of the materials at your disposal, and of the mode of using them to the best advantage. This takes us a step farther. The suitable treatment of material so as to make the best of its natural qualities

without waste or misapplication carries us a long way towards our third great principle.

3. Aesthetic expression

This third principle is that the design should be the aesthetic expression of the construction. For architecture differs from mere building simply in this, that it is the art of building expressively and therefore beautifully. The two first principles are within the compass of everyone, but the third can only be applied in an artistic age and by an artistic people. It is with nations as with individuals. Just as two men may do the same thing, but one will do it gracefully and the other awkwardly, so the buildings of one age and one people will be beautiful, while those of another, though possibly no less commodious, will be vulgar and distasteful. In either case the artistic faculty is a gift of nature which may be cultivated but cannot be implanted when it is absent.

Rules of universal application

It is by conforming to these three rules of solidity, economy, and aesthetic expression that all good styles, —Romanesque and Gothic among them,—are justified. In plain language they must be strong, they must be sensible, and their work must show that they are so. But though these principles are of universal application they lead to different results in different countries and ages. This is inevitable if they are to be true to themselves, for they demand the expression of the special conditions in each case. The difference between one true and living style and another does not arise from any difference in principle, but from difference of circumstance to which those principles are applied. It will be our task to trace their influence on the development of Gothic architecture through the circumstances amid which the style arose.

Variety in result

Gothic the development of Romanesque

The Byzantine and Romanesque styles are the phases into which architecture passed in Eastern and Western Europe, respectively, from the decay of the older style of the Roman world. And Gothic is the phase, or rather the succession of phases into which the art passed out of Romanesque during the Middle Ages. For late Gothic differs from the early styles as much as they do from their parent Romanesque. Henry VII's chapel at Westminster and Henry III's choir are both Gothic, but they differ from one another almost as much as Henry III's work does from the nave of Durham.

Romanesque more universal than Gothic

Romanesque art out of which Gothic was developed spread in various forms through all Western Europe; from Italy where it began, to our own country. But Gothic which was essentially of Northern origin, and a Teutonic art, though it had force enough to push its way into the heart of the Latin population of Southern Europe, where classic tradition never wholly expired, was unable to find there its full and free development.

Flux and reflux of Roman and Gothic

There was in fact a flux and reflux of the two styles, Classic and Gothic, from South to North, from North to South, and back again. Just as the influence of Roman art spread beyond the Alps, inspired the rude beginnings of the native styles of France, Germany, and England, and formed the basis of Romanesque architecture there no less than in Italy, so when northern Romanesque passed into Gothic the new style overflowed into those countries where Classic architecture had its origin, and affected their art till the wave spent its force and ebbed back again Northwards.

Gothic alien to southern temper

The sentiment of Gothic architecture is in fact alien to the clear positive temperament of the Latin races. It reflects in its gloom and mystery the romantic temper

No mystery in Byzantine architecture

of the North. In the Byzantine and Italo-Byzantine basilica, and even in S. Sophia itself and the domed churches of the East there is no mystery. All is open and visible. There are no cavernous portals like those of Chartres and Amiens, no dimly seen perspectives like those of Canterbury or Westminster, no surprises like those of the eastern parts of Wells, Winchester or Salisbury. Even the crypts of Italian churches are light and cheerful, unlike the ghostly dimly-lit vaults, and the dark mysterious recesses of our northern undercrofts. Italy is no place for mysteries of Udolpho, sliding panels, hidden chambers, and secret passages; the scene of Horace Walpole's "Gothic Romance" had been laid more appropriately among the robber castles on the Rhine, or in the wilds of the Black Forest, than at Otranto.

Gothic a style of individualism

One more characteristic. Gothic is the style of freedom from convention, and of individuality. Romanesque had only half achieved liberty; it was still held back by Roman tradition, though it no longer obeyed strict Vitruvian rules. It was left for its Gothic successor to complete the escape, and to travel on its way in entire freedom from Classic tradition, and without any fresh impediments to take its place. The adoption of the pointed arch was no doubt the principal instrument of its liberation, as will presently be explained; but the change was not limited to construction only, it ran through all parts of the design in the direction of greater naturalism. In its ornament the forms of animal and vegetable life were treated with constantly improving art and constantly greater truthfulness; and in construction the natural laws of statics and equilibrium were studied rather than traditional formulas, and the very forces which endanger

the stability of a building were enlisted in its service and made to contribute to its security.

Construction based on natural law, not on natural form

The relation of construction to nature is of course not concerned with direct imitation of natural form, but with observance of natural law. Gothic architecture is not as Raffaelle thought imitated from the intersecting branches of an avenue of trees; a notion as idle as that of Vitruvius, who derives the proportion of the orders from a human figure, and sees in the Ionic column the stature of a maiden, in the volutes of the capital her ringlets, and in the fluting of the shafts the folds of her dress. This to be sure is sad nonsense, though it was long taken for gospel truth. Construction is natural when it takes the directest way to its end, by availing itself of the natural laws of force and weight, and the natural qualities of material, instead of observing conventional rules that make no allowance for circumstance. Thus regarded, Gothic is the most natural style in the world, because it is the most free from convention.

Variety of Gothic

From this freedom results its exuberant variety. Gothic is the style of individualism. Though obeying in a general way the school or manner of the day no two Gothic buildings are ever really alike. The distinction of cathedrals and larger buildings is unmistakeable: each can generally be recognised at a glance from sketch or photograph. But this variety is not less remarkable on a smaller scale. One rarely enters an old village church without finding something new, something original, something that gives the building an individual character though conformable in the main to the style of its period, —Romanesque, Decorated, or Perpendicular. Contrast this with the immobility of architecture in Egypt, where century after century, millennium after millennium passed

Monotony of Egyptian architecture

unnoticed, and the same style continued under the Ptolemies and Caesars, with but slight modification from what it had been under the Pharaohs thousands of years before. Contrast it also with the uniformity of Roman architecture, where certain patterns of temple, theatre, or basilica were stereotyped, and carried with the spread of empire from Rome to Syria, Africa, Gaul, and Britain. Roman architecture reflects the centralization of the empire in Rome, and the immobility of imperial institutions and of the society that lived under them. Gothic architecture expresses the restless temper of the modern world, its passion for progress, its grasping at new ideas and novel methods. It never stood still. As fast as one problem of construction was solved, something beyond it invited a fresh departure. No sooner was one style perfected than the builders tired of it and moved on to something else. For barely three and a half centuries Gothic architecture ran its impetuous course and then sank exhausted before the returning tide of Classic at the Renaissance. It had taken nearly eight centuries to develop Romanesque slowly and tentatively from its Roman origin down to the beginnings of Gothic;—from Ravenna to Chartres, Canterbury, and the choir of Lincoln. But in less than half that time Gothic architecture ran through all its successive phases, from the chaste severity of Sens and Paris to the wild luxuriance of the Flamboyant work at Abbeville and S. Riquier, and from the last efforts of Norman in the west front of Ely and the Galilee at Durham to the fairy vaults of Windsor, King's College, and Henry VII's chapel at Westminster. The Norman nave at Peterborough was hardly finished before the Early English west front was begun. Those who helped to raise it might in their old

Immobility of Roman architecture

Restlessness of Gothic

Long duration of Romanesque

Short duration of Gothic

Its rapid transition

age have seen the last examples of Geometrical Decorated work, and their grandchildren might conceivably have worked in the earliest perpendicular style, on Abbot Stanton's relining of the choir at Gloucester, or on Bishop Edyngton's west front at Winchester.

Comparison with history of painting

The rapid development of the sister art of painting in Italy during the 13th and two following centuries is marvellous enough, though there was an interval of over 240 years between the birth of Cimabue and that of Raffaelle. But in the history of Gothic architecture 150 years sufficed to carry it into no less than four distinct phases in England, and three in France, where there is nothing corresponding to our Flowing Decorated of the 14th century. From De Lucy's Early English lancets at Winchester in 1202 it is but 40 or 45 years to Henry III's choir at Westminster where bar tracery appears. Another half century brings us to the Chapter House at Wells, where geometrical forms begin to melt into ogee curves. Twenty years later, in 1321, the Lady Chapel of Ely was begun in fully developed curvilinear Gothic, the very flower of the art in England; and another quarter of a century closes the Decorated period and ushers in the Perpendicular style at Gloucester in 1350, and Winchester a few years later, which had a longer life than its predecessors and lasted till the advent of the Renaissance in the 16th century.

Early English 1202

Decorated 1300

Perpendicular 1350

Surely there has never been another such astounding instance of artistic growth in the world's history.

Universal application of Gothic

The spirit of Gothic art pervaded all that was done during the period of its existence. To confine the name to one of its manifestations, that of vaulting, is to take the letter for the spirit, and to mistake the whole nature of the movement. It is the art of liberty as opposed to

Gothic applied to vaulting

artificial formula, of reason as opposed to convention. Applied to stone roofing it has given us the Gothic vault with its attenuation of support, and equilibrium attained by counter-thrust; applied to woodwork it resulted in the magnificent roofs of Westminster Hall, Eltham Palace and Hampton Court and the stalls of Winchester, Lincoln, and Gloucester with their delicate traceries and canopies. But it was the same spirit that inspired them all,—the spirit of reason and direct adoption of the simplest means to the end, regardless of convention and tradition. To reduce thrust the pointed arch superseded the Roman and Romanesque round arch in spite of inherited love for the older form. For greater convenience of plan, and greater economy of material, voids were enlarged at the expense of solids; the massive piers of Roman and Romanesque builders became mere slender clustered columns; the support of solid walls was replaced by that of buttresses turned at right angles to them on the transverse line of the piers; and the high vaults were strutted by flying arches bridging the aisles. This surely was the most unconventional feature ever introduced into building: a purely mechanical contrivance which an artist might well have despaired of making comely. For greater light the intervening curtain walls between buttress and buttress, having no longer anything to do but to carry themselves, were converted into windows, groups of detached lights at first, till tracery came in to hold the glazing with the least amount of solid support.

to woodwork

to constructive problems

Gothic the style of reason as opposed to convention

Through all these developments we see the working of rational motives free from restraint of conventional rule and precedent. There was a reason for them all. The Gothic artist followed unhesitatingly the lead of

every novel requirement, waiting for no authority but that of common sense and economy, and gladly welcoming every fresh constructional problem in turn, as affording the most fertile suggestion for artistic expression.

The same spirit may be traced in all he did; in humble village church as in mighty minster, in lonely manor house as in lordly palace, in timber construction no less than in masonry. Gothic art is the flower of the freedom-loving Teutonic intelligence, the outcome of natural unaffected application of means to an end; and the shape it took was the natural, perhaps the inevitable result of the conditions of time, place, and people amid which it arose.

CHAPTER II

THE GOTHIC VAULT

General conditions of architecture

THREE cardinal principles, as we have said, govern all great and living styles of architecture. Firstly SOLIDITY, which gives us sound construction. Secondly ECONOMY, which prescribes proper use of material, and adaptation of design to particular needs by due observance of local circumstance. And lastly AESTHETIC EXPRESSION of the two preceding conditions of sound building on one hand, and appropriate design on the other.

Particular conditions of architecture

These three general principles apply to all styles: and the difference between style and style arises from the particular economical circumstances of each country, each age, and each people. It was pointed out in the last chapter how the unchanging character of Egyptian civilization was reflected in the immobility of Egyptian architecture; and how the universal spread of Roman architecture throughout the Empire expressed the centralization of Roman institutions in the imperial city. It remains to trace the economical conditions of modern, or post-Roman Europe which gave direction to the art of the Middle Ages, made it what it was, and found aesthetic expression in the style which we know as Gothic.

Romanesque architecture

All styles of architecture are based on what has gone before; and when his turn came the only models for the Romanesque architect were Roman buildings. But the

expensive character of Roman work, constructed with huge stones, colossal walls, and vaults of scientific construction, the work of wealthy princes with an unlimited command of labour and materials, and possessed of all the known science of their time, made it hopelessly beyond his power of imitation. The Romanesque style in its infancy was the child of poverty and incompetence. The architect had to produce with small stones and rude appliances the best version he could of the work of the Masters of the World. He pilfered columns and capitals from deserted temples and palaces and set them up in rows in his churches, propping the short ones on blocks of stone to make them range with the long ones, putting capitals on shafts that they did not fit, and forming architraves and cornices of fragments of classic entablatures that had nothing to do with one another, as we see them in the Matroneum of S. Lorenzo fuori le Mura at Rome. Vaults were beyond his humble skill, and his roofs were of wood over both nave and aisles. For his arches the great stones of the Roman were out of the question: he could neither quarry nor work them, and probably he had no tackle to lift them. Hence came the system of subordination of orders in the arch, which was to play so leading a part in all subsequent architecture. Instead of the large voussoirs of the Roman which reached from side to side of the arch through the thickness of the wall, he learned to build the arch with little stones, in two or three successive rings, and still further to economize by recessing each ring within that outside it. This introduced at once an aesthetic motive. Pleased with the concentric shadows cast by his receding rings or orders he set to work to decorate them by moulding the square edges of the stones, and thus led the way to the richly

Its difficulties

Use of materials at second hand

Subordination of orders

decorated arcades, and the sculptured portals of the Middle Ages. For the gorgeous doorways of Paris, Bourges, Amiens, and Lincoln with their wealth of imagery, have the ornament disposed on concentric rings or orders retired regularly within one another[1]. And thus a device originating in poverty and economy of material resulted in one of the main artistic motives of Gothic architecture.

Ambition to vault

The Romanesque architect did not rest here. The Romans had covered their buildings with vaults of stone or concrete, and his own wooden roofs did not content him: he felt he must do as the Romans did and protect his churches with a more monumental and less perishable covering. The wooden roof was a constant source of danger. The Romanesque churches were always getting burned down. At Tours the abbey of S. Martin and twenty-two churches were burned in 997. Chartres Cathedral was burned in 1020, Vézelay in 1120, when eleven hundred and twenty seven souls perished. S. Front at Périgueux was consumed in the same year. Nearly all the Carolingian cathedrals were burned,—many of them five or six times,—during a period of 200 years. S. Martial at Limoges, we are told, was burned in 954, 955, 1053, 1060, 1140 and 1167[2]. On every ground both of security and dignity the Romanesque architect felt that he must have a stone vault.

Danger of wooden roofs

Aisles first vaulted

His first achievement was that of vaulting the aisles, and it was long before he had skill and courage enough to vault the nave. Many Romanesque churches never did receive a vault over their naves. At Ely the nave

[1] The development of the Gothic orders is fully explained and illustrated in my *Reason in Architecture*.

[2] Lasteyrie, *Architecture Religieuse en France à l'Époque Romane*, p. 226.

and transepts, and at Winchester the transepts still bear their wooden roofs. At Peterborough, though the Norman aisles are vaulted, the high roofs and ceilings are of wood; but in this case stone vaulting was contemplated and preparation made for it, though when time came for constructing it the courage of the builders failed them.

Perseverance in barrel vaulting

It was not only risk of vaulting so wide a span that deterred the Romanesque architects from the attempt. Other difficulties of a geometrical kind presented themselves in the way of cross-vaulting so large a space. Consequently in many parts of France, especially in the Auvergne and Aquitaine, barrel vaults continued to be turned over the nave down to the latter half of the 12th century, and may still be seen at Arles, Clermont-Ferrand, S. Junien, S. Nectaire, Autun, and in many other places. But the inconvenience of this form of vault which prevented an adequate clerestory, and the difficulty of supporting the continuous thrust of such vaults along the side wall, made it imperative to revert to the cross-vault of the Romans, which allowed large and high clerestory windows, and concentrated the thrust on isolated points that could be fortified by buttresses.

Its inconvenience

The cross-vault

Articulation of churches

This introduced a new element into the plan of the church. It was now *articulated*, or divided into bays, at the points where the thrusts were concentrated and the buttressing applied. Each bay was a complete unit in itself,—an epitome of the whole fabric,—and the building consisted of a group of these independent bays associated in a common system. This articulation is an important element in Gothic architecture which must not be lost sight of. At the same time it is not a novel feature, for the Romans had invented it and used it already.

A familiar instance of this is the Basilica of Maxentius

Basilica of Maxentius

in the Roman Forum, of which illustrations are to be found in most books on architecture[1]. It consists of a vast nave of three square bays with a span of about 80 ft. which are cross-vaulted. On each side are three chambers 56 ft. deep, forming something like aisles, and divided from one another by massive walls, pierced by an arch, which buttress the central vault at the points where the thrusts are concentrated. Barrel vaults are turned over these side chambers from wall to wall, their axis being at right angles to that of the main hall, and these vaults are kept low enough to leave the lunettes of the nave vaults open as a clerestory. In this building the system of concentration of thrusts and supports, and articulation of the structure is already perfectly developed, and carried out on a gigantic scale.

The quadripartite vault

The simplest form of a cross, or quadripartite, vault is that generated by the intersection at right angles of two semi-cylindrical vaults, which cut one another on two diagonal planes. These planes are represented on plan by the two diagonal lines AD and BC (Fig. 1) drawn across the bay, compartment, or articulation of the structure. These diagonal lines are the groins, which form a projecting edge or arris, from which the two cylindrical surfaces recede on each hand. These groins, obviously, can only lie straight over the true

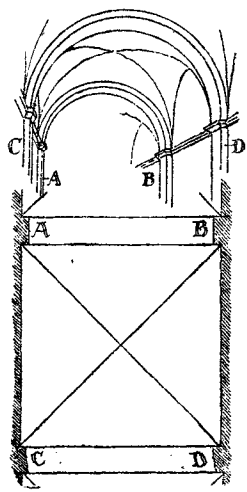


Fig. 1.

[1] *e.g.* Fergusson, *Hist. of Architecture*, vol. I. p. 330; Simpson, *Hist. of Architectural Development*, vol. I. p. 130; Viollet-le-Duc, Lect. IV; *Hist. of English Church Architecture*, Plate V, G. G. Scott, Junr.

diagonal lines when the two semi-cylindrical vaults are of equal span. Were they unequal the line of intersection would not be straight, but wavy, and not only unsightly, but difficult to construct and unsubstantial when constructed. The usual plan therefore was to make each bay of the aisle square, or so nearly square that the intersecting lines or groins should be regular. A strong rib was generally thrown across the aisle from pier to pier, AB and CD (Fig. 1) which defined the articulation and so gave expression to the constructive idea, though not really necessary for the constructive method so long as the nave was not vaulted; and between these ribs there was no difficulty in forming a square groined vault.

Square bays

But the nave is generally about twice as wide as the aisle, and therefore if its bay were of the same length as that of the aisle the compartment of the nave vault would be not square but oblong, and one of the intersecting half-cylinders of a cross-vault would be twice as wide as the other, and also a good deal higher, so that no true diagonal groin would result.

Difficulty of vaulting an oblong bay

This difficulty retarded the science of vaulting for a long while. In some places, as for instance in the cathedral of Valence in Burgundy the architect contented himself with cross-vaulting the aisles, and barrel-vaulting the nave. The nave vault is strengthened by transverse arches, and the aisle vaults are kept high enough to afford abutment[1]. This allowed of no clerestory windows, and indeed did not challenge the difficulty at all.

Valence cathedral

A solution in one way was found for perhaps the first time at S. Ambrogio in Milan. The nave there being

S. Ambrogio, Milan

[1] *v.* illustration in my *Byzantine and Romanesque Architecture*, vol. II. p. 115. The construction at S. Savin is the same except that there are no transverse ribs, *v.* Illust. do. p. 52.

twice as wide as the aisle is divided into square bays, A, B, C, D (Fig. 2), each of them as long as two bays of the aisle which are also square. Consequently the cross-vaults are regular, and the groins lie in true diagonal planes in the nave as well as in the aisles.

Alternation of piers

From the plan (Fig. 2) it will be seen that the result of this arrangement is that the piers A, B, C, D have double work to do; for they receive the concentrated charge of the great vaults of the nave as well as those of the lesser vaults and arches of the aisle and triforium above it; while the intermediate piers E and F receive that of the lesser vaults and arches alone. This inequality of stress is well provided for and expressed by the greater substance given to the main piers A, B, C, D which are clustered, and have not only the members that carry the lower arches but additional members that run up to carry the arches of the nave vault. The intermediate piers E and F, on the other hand, which alternate with the great piers, are smaller, and have only the members needed by the nave arcades and the aisle vaults (Fig. 3).

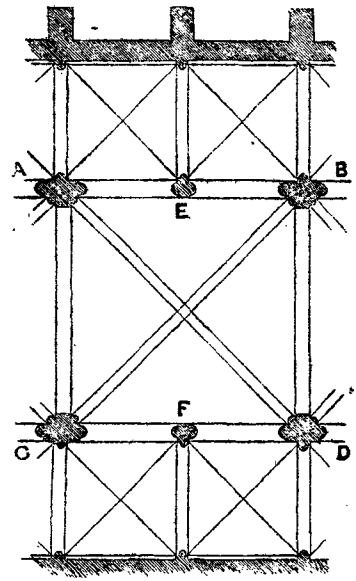


Fig. 2.

The simple cross-vault

The construction of a cross-vault on a square plan and on a small scale is easy, but on the scale of the nave of S. Ambrogio it is not such a simple matter. The difficulty, as always, is with the groins.

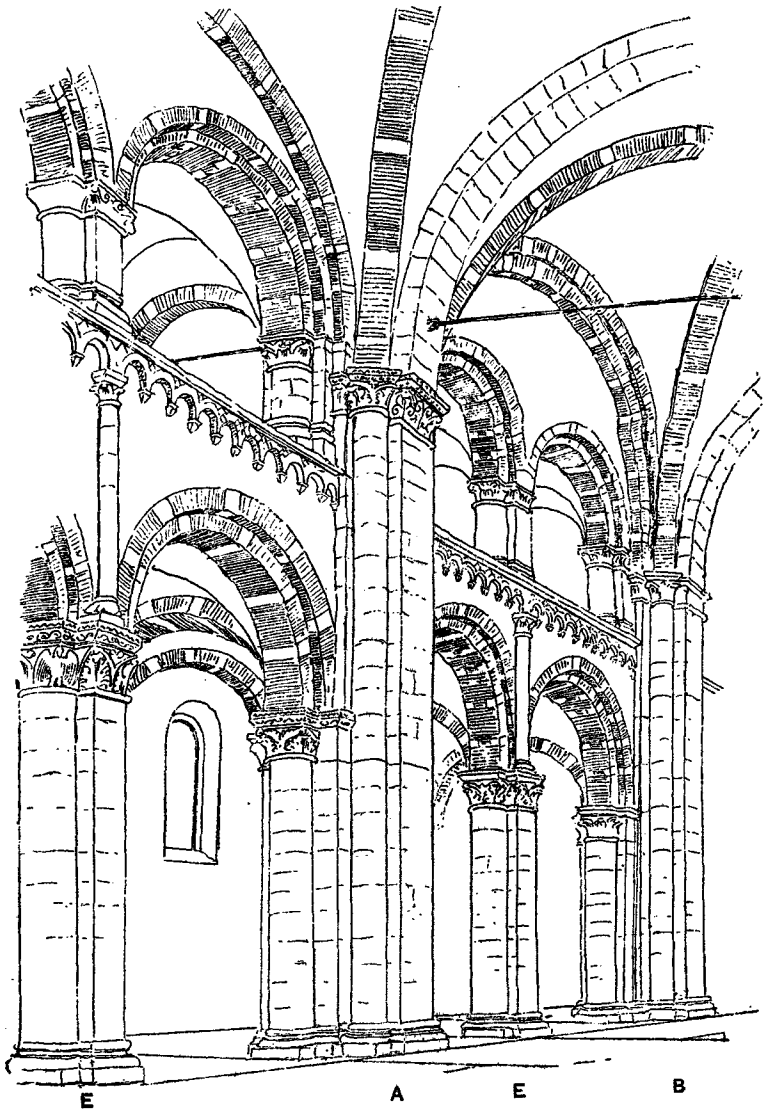


Fig. 3.

The groining line

Let us take first an example of a cross-vault over a square bay of moderate size, say that of the crypt at Winchester which is about 14′ × 14′. The four equal bounding arches are represented by A, B, C, D in Fig. 4, of which one A, E, B is set up in elevation over its base. The two half-cylinders of the vault being equal in span

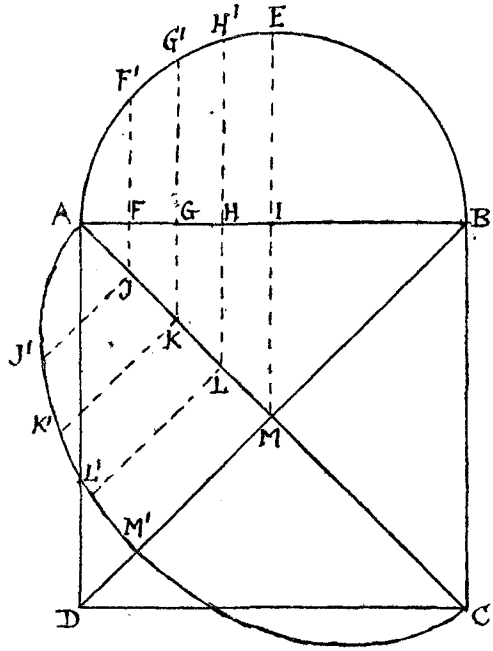


Fig. 4.

the groins will lie true in a straight line between AC and DB. On the base AC we set up the elevation of the diagonal groin, of which the crown M′ will of course be level with E. The curve of the groin is found by what are called ordinates. The direct arch A, E, B, which is the true section of the half-cylinder, is divided on the base line AB into equal parts at F, G, H, I, and the diagonal likewise at J, K, L, M. Then if J—J′ is

made equal in height to F—F′, K—K′ to G—G′, L—L′ to H—H′, and M—M′ to I—E, a line drawn through their tops will give the true curve of the groin, which will be an ellipse. This is the usual vault of Norman crypts, and Norman aisles and all Romanesque vaults of small dimensions; and the crown of the arches being all on the same level its convenience is obvious, for in one case it carries the floor of the church, and in the other that of the triforium.

Ellipse of the groin

A glance, however, tells us that the ellipse of the diagonal is not so strong a form as the semicircle of the direct arches. On a small scale it will do well enough, but on the scale of the nave at S. Ambrogio it would be dangerous. It is true that there were cross-vaults with a level crown, and consequently with elliptical groins, on a much vaster scale over the Basilica of Maxentius at Rome with its 80 foot span: but they were moulded in concrete, and compacted into shells of enormous strength, and the Lombard architect had no such resources at his disposal. His solution of the problem was a bold one. He gave up the elementary idea of a cross-vault being the intersection of two equal half-cylinders, and drew his diagonal groin semicircular instead of elliptical. This made an end of the level crown, for the wide semicircle of the diagonal rose much higher than that of the narrower direct arches, and the four cells or panels of the vault, which represented the elementary quarter-cylinders, had to rise from the side to the centre. The vault therefore became in a manner domical, though of course without any real domical construction (Fig. 5).

Weakness of elliptical groin

Semi-circular groin

This was a daring innovation: a new departure in groining; and it was accompanied by an innovation perhaps still more novel. Romanesque vaulting had

long been divided into bays by strong transverse ribs (*v.* Fig. 1 *sup.*) even in the case of barrel vaults, and wall-ribs had been constructed in the side walls to generate the cross half-cylinders. But in addition to these the high vaults at S. Ambrogio have diagonal ribs or arches of brick laid under the groins. Whether they

The diagonal rib

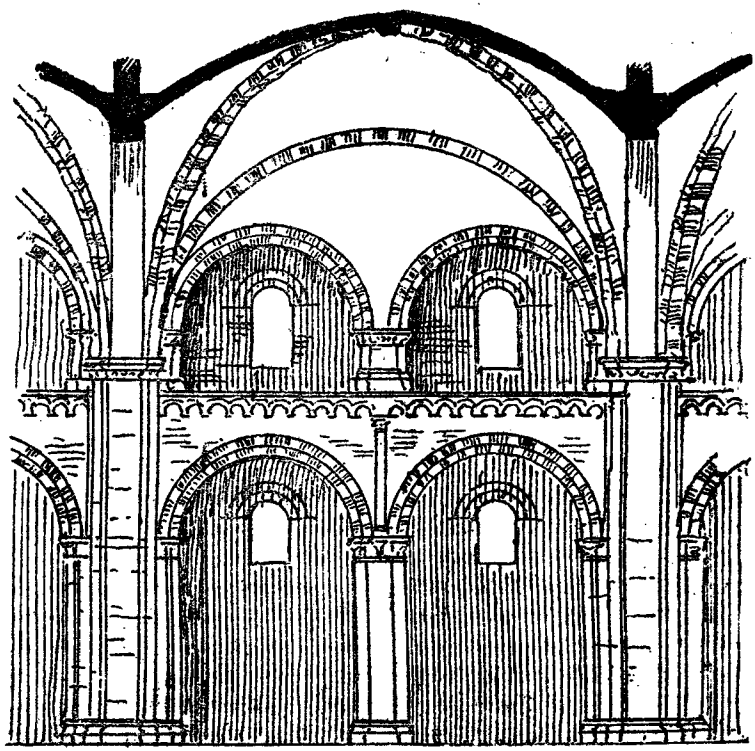


Fig. 5.

were suggested by a wish to fortify the groins, or whether they were a device to ensure a true curve on the diagonal line which would have been uncertain if the four ramping panels or cells of the vaulting surface had been simply brought together, I am not sure. Probably

both motives had a share in the invention which is a very important one, for it anticipates the whole system of the rib and panel vaulting of the Middle Ages. We shall return to this presently.

Plan of the piers

Let us now look at the plan and construction of the piers on which the arches of walls and vaults rest. It has already been pointed out that they are of two kinds, main piers and intermediates alternately, the latter carrying the lower arches and vaults only, the former carrying these and the high vaults as well. If they are examined it will be found that the members of the clustered pier bear a distinct relation to the members of the arches that fall upon them (*v.* Fig. 3). The main piers AB have a wide flat pilaster in front which carries the flat tranverse arch of the nave vault. Right and left of this is an attached shaft from which the diagonal arch of the groin springs, and the capital of this shaft is set obliquely in the direction of the groin. A small square member next to this shaft carries the wall-rib. Within the wall-rib are the two arches of the triforium, each of which consists of two rings or orders, the subordinate one being retired within the outer. Each of these orders has its own support, a square member carrying the outer, and an attached shaft the inner. A similar arrangement appears in the lower storey, except that the outer order is not separately provided for in the jamb, and this is a flaw in the strict logic of the design.

Correspondence of pier and arch

In the intermediate piers EE the three outer members of the main pier are omitted, for they are not wanted, and only those remain which serve the lower arches.

At the back of each pier similar provision is made for the vaults of triforium and aisle.

Finally comes the question how the thrusts of the

System of support to thrusts

high vaults of the nave, which are concentrated on the main piers, are met and resisted. At S. Ambrogio there is no difficulty, for there is no clerestory, and the vaults of the triforium are high enough to support that of the nave. A strong transverse arch of the triforium vault, on which a heavy buttress wall is raised, meets and counterthrusts the nave vault at the main piers on which

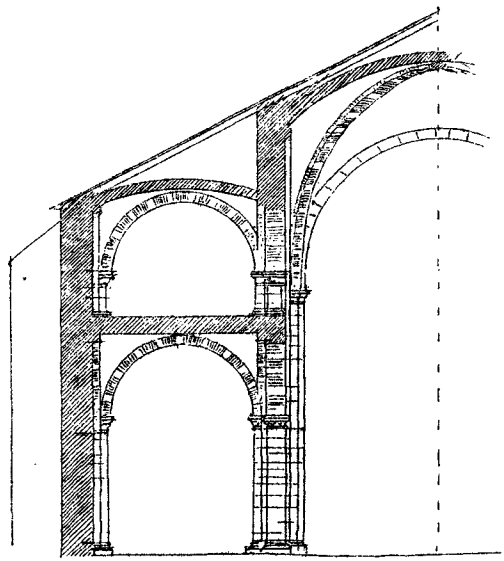


Fig. 6.

the thrust is concentrated, and is itself supported by the outer wall, which is strongly buttressed, and forms the ultimate *point d'appui*, so that the whole structure is in equilibrium (Fig. 6).

Difficulty created by clerestory

It is when the nave is raised high above the aisles with a clerestory that further modes of support have to be devised, and other countervailing thrusts have to be called in to neutralize the disruptive force of the high

vault of the nave. With this problem we shall deal presently.

General construction of S. Ambrogio

The construction of this Romanesque church of S. Ambrogio at Milan, of which the foregoing is a brief anatomical account, furnishes an early and simple example of nearly all the elementary principles of Gothic architecture. We find there in the first place that concentration of thrusts on isolated points and concentration of resistance at those points to meet them, of which the consequence is the articulation of the building into distinct self-contained bays; and though this was not exactly a new discovery, for there is something like it in Roman buildings, it was carried much farther in Romanesque and the following styles. We find there, secondly, that subordination of orders which plays almost as important a part in mediaeval architecture as the vault itself, and is an even more distinctive characteristic: for the vault is not a Gothic invention, whereas nothing like subordination of orders is found in classic architecture. We have thirdly, at S. Ambrogio the free use of arches of different span and rise in the construction of the vault, instead of the regular cross-vault of the Roman with level crown. We have also the whole system of vaulting ribs, transverse, diagonal, and wall-rib, which is foreign to Roman use. And finally we have the piers broken up into members that correspond logically to the members of the arch or vault they carry.

Concentration and articulation

Subordination of orders

Free vaulting

Correspondence of pier to load

Particular principles of Gothic

To these elementary principles,—1st, concentration of thrusts and supports and consequent articulation of the building; 2nd, subordination of orders; 3rd, freedom of vaulting arches and use of vaulting ribs, and 4th correspondence between members of arch and load, most if not all the subsequent developments of Gothic

architecture may be more or less directly referred. The construction of this single Romanesque church has been explained at some length, because if the reader has once mastered it he will have a key to the full understanding of the later and more intricate problems of Gothic construction.

CHAPTER III

THE GOTHIC VAULT (*continued*)

THE scheme of S. Ambrogio is logical and complete so far as it goes: but it requires that all the bays shall be square, and it was not always convenient or even possible to make square bays in the nave, occupying two of those in the aisle. The difficulty of cross-vaulting

Limitation of square vaulting bay

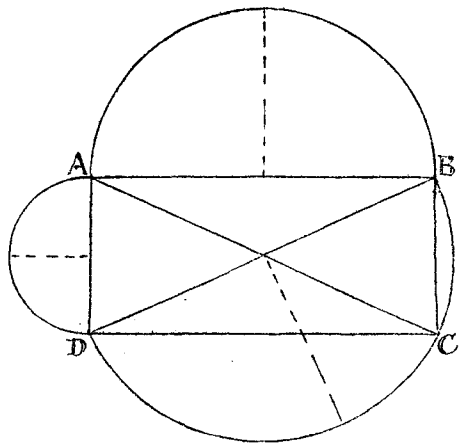


Fig. 7.

an oblong bay had still to be encountered, and also that of raising the nave vaults high enough for a clerestory.

An oblong bay is shown in Fig. 7. The lines AB and DC represent the transverse arches dividing the bays: AD is the wall-arch: and AC and BD are the

Difficulty of vaulting an oblong bay

diagonal groins. On each base line is set up its arch, which in early work would of course be semicircular. It will be seen at once that it is no easy matter to form a cross-vault with three arches so different in height. Between the transverse and diagonal arches the difference is not too great to be got over by making the vault domical: but the cross-vault generated by the wall-arch is more difficult to deal with. We might of course carry this half-cylinder horizontally to intersect the main vault, making what is called a Welsh or coal-scuttle vault

The Welsh groin

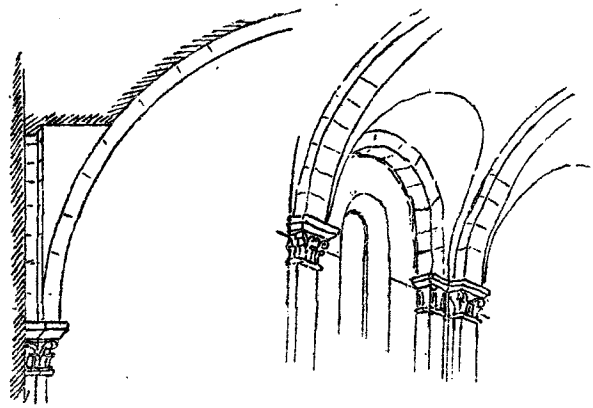


Fig. 8.

(Fig. 8). That however can hardly be called a cross-vault at all, but is only a barrel vault with side pockets. Moreover it gives very little height for a clerestory window. Another plan was adopted at Vézelay, and at S. Jean in Autun, where the cross half-cylinder is sloped up towards the crown of the main vault, but that gives a very irregular line of intersection and leaves only the same room as the other plan for the clerestory window. The next device was to stilt the semicircular wall-arch in order to raise it nearer the level of the

The groin at Vézelay

others: but that made the smaller half-cylinder encroach on the surface of the larger, behind the true groining line, and caused an awkwardly winding surface like the blade of a plough-share or screw-propeller, which it was hard to construct solidly even when the groin was strengthened with a diagonal rib.

Difficulty of round arch

The whole difficulty, as will have been patent from what has been said, arises from the use of the semi-circular arch, which is inelastic, its height being half of its span, and its form therefore incapable of variation. The solution was found in the adoption of the pointed arch, which could be raised to any required height and made of any required curve.

The pointed arch

It is not worth while to go at any length into the question of the origin of the pointed arch, which has been much discussed. Long before it came into use for construction its form must have been familiar, for we find it in Greek tombs, though without the structure of an arch. It was used in their buildings by the Arabs long before its adoption in the West: and was employed by them, or by those who worked for them, probably Byzantines, in the Dome of the Rock and the Mosque El Aksa at Jerusalem in the 7th century. It occurs in the arcades of the Coptic churches of Dair Anba Bishoi, and Dair-es-Suriani in Egypt, which are attributed to the 6th century[1]; and the arches of the mosque of Ibn Touloun at Cairo, which was built in 878, are pointed. Nor need we stay to enquire whether its introduction into the West was due to returning Crusaders who had seen it in the East, or whether its employment was suggested by reasons of construction, which is the more likely explanation. From whatever source it came we find it was in use

Its early use in the East

[1] A. J. Butler, *Coptic Churches*, vol. I. ch. VII.

by the Romanesque builders early in the 12th century both for arches and vaults. They found it convenient to give a pointed section to their barrel vaults, which were constructed in one with the outside gabled roof, because in that way they diminished the mass of masonry which loaded the crown; and they further observed that its thrust being directed more downwards the pointed arch was easier of abutment than the round arch which exerted a more powerful lateral pressure. At first it seems to have been adopted somewhat grudgingly, as a useful but unwelcome expedient. The round arch which they had inherited from the Romans still had a firm hold on the affection of the builders, and long after the advantages of the pointed arch had brought it into general use in constructive features the round arch was employed for windows and doors, and such features as wall-arcading which were purely decorative.

Preference for round arch

Introduction of pointed arch

At first the pointed form was used timidly, and not raised much above the semicircle. For the diagonal groin was generally made semicircular and the transverse arch did not need to be raised much to reach the same level. Over a square bay this caused no irregularity: the vault was as simple as the Roman cross-vault. But over an oblong bay the narrow side arches had to be more acutely pointed, and this caused difficulty. Fig. 9 shows an oblong bay of the same proportions as that in Fig. 7, but with a vault of pointed arches instead of round ones. The diagonal arch, raised on the base BD is semicircular, and the transverse on the base AB and the wall-arch on AD are pointed and raised to the same height as the diagonal, so that the crowns of the cells or panels are level.

A little consideration of such a vault as this will

convince us that the freedom of the arch, begun at S. Ambrogio and completed by the adoption of the pointed form, entirely upset the primitive idea of the cross-vault being generated by the intersection of two half-cylinders or half-barrels either round or pointed. The surfaces of the vaults, instead of being simply cylindrical, were now too irregular to meet symmetrically on regular lines, for the panels required to be twisted and tilted in order to come together at all. It was as

Idea of intersecting surfaces abandoned

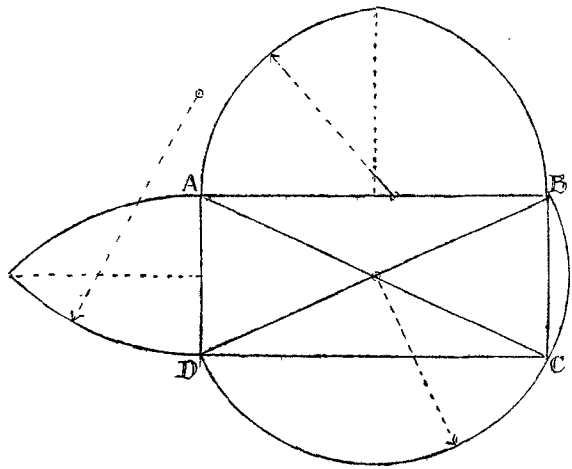


Fig. 9.

much for this reason as for that of strengthening the lines of intersection that ribbed vaulting was invented. It was impossible to make an even junction by simply bringing the curved surfaces together without so much winding and twisting as to be dangerous: but it was easy enough to build ribs with a regular curve which would be both sightly and strong, and the panels or vaulting surfaces could be fitted between them and rest on them securely in spite of their winding surfaces.

Rib and panel vaulting

Rib and panel vaulting

Henceforth vaulting was not as heretofore a system of intersecting surfaces, but a system of ribs and panels; of arches and filling-in; the ribs forming a framework or skeleton, and the panel being a covering or ceiling fitted

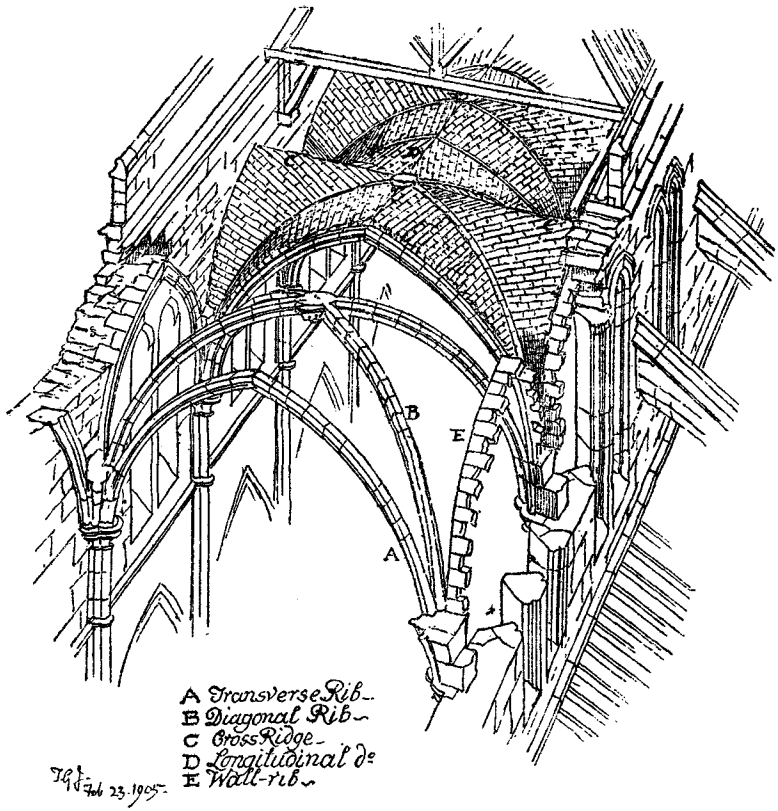


Fig. 10.

in between them, possessing, however, owing to its arched form an independent strength of its own.

The system of constructing vaults on the new system is explained by Fig. 10 where one bay is shown with the skeleton of ribs only and others with the panel filled in.

Economy of centering

One advantage of the new construction was that it dispensed with a great part of the centering required for the Roman vault. To construct a vault without ribs it is necessary to form centering under the whole surface: framed centres must be put in the line of the groins and the transverse arches, with others between, on which "lagging" of planking or slats is laid to receive the vault of stone, brick, or concrete. But in ribbed vaulting centering is only necessary under the ribs, and the ashlaring of the panel can be filled in, course by course, on a moveable piece of wood resting on the centering of the ribs and shifted as soon as each course is finished.

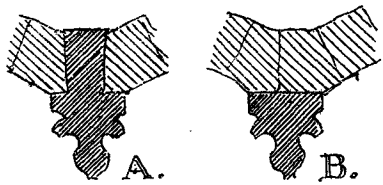


Fig. 11.

Double function of ribs

It is of course obvious that the ribs may be made to contribute largely to the strength of the vault, especially when laid under the diagonal groin, and above all when there is much winding in the panel. The transverse ribs might often be safely omitted, and in fact are so in each alternate articulation at Durham. But in many cases the purpose fulfilled by the rib is really more that of acting as a centre, by giving a true arched line, than that of support. Often the rib was not bonded to the filling in, as it should be, by a web on the back (Fig. 11 A) but simply laid under the ashlaring as in Fig. 11 B. It is so in De Lucy's retro-choir at Winchester where the ribs add but little to the strength of the vault. It is so also

The webbed rib

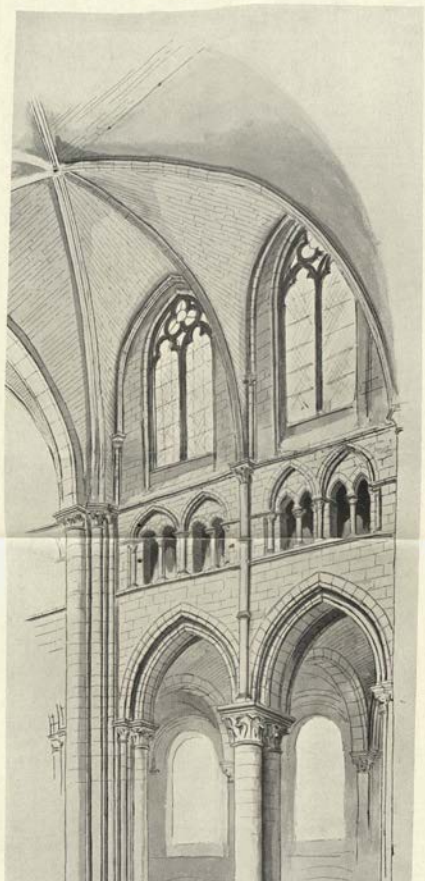
The webbed rib

in the vault at Lincoln where in one case the rib has sunk away leaving the ashlar vault standing without it. In one of the great cross-vaults under the ruins of the Bishop's Palace at the same place the ribs have perished from decay, but the ashlar groining shows no sign of weakness in consequence. The web I believe did not make its appearance before the end of the 13th century: till then the rib was simply laid under the vault as in Fig. 11 B. The web seems to occur generally in Decorated work, and I think always in Perpendicular vaults, as for instance in the choir aisles and Wykeham's building at Winchester and in the vault of the Lady chapel at Christ Church Priory, which I had occasion to repair and partly reconstruct. I am told the same distinction of web or no web occurs at Chester, S. Patrick's, Dublin, Hereford, Ripon, and Hexham[1]. The early 14th century vault over the two western bays of the nave at Worcester has ribs without the web, the ribs of the rest of the nave vault, dating from 1377, have it.

Winding of surfaces

This system allows of many liberties being taken with the form of the vaulting surfaces. They could now be made to wind without danger so as to give more room for a clerestory. The wall-arch in Fig. 9 is very narrow and would cramp the clerestory window. The remedy was to stilt it, as in the nave of Sens Cathedral (Plate I) where the wall-rib springs from the capital of a small shaft that rises from the cornice at the springing of the main vault. The pocket of the vault being taken up straight with this shaft as high as the springing of the wall-rib is therefore left behind the main vault, which

[1] For information as to these latter instances I am indebted to Mr Thompson of Peterborough who has had to do with them all. He says that in the Maiden's Aisle at Chester either the rib or the vault had slipped for want of the web.



T. G. J. SENS CATHEDRAL—The Nave

advances in front of it with the sweep of the diagonal rib. Consequently the group of ribs shown at their springing at A (Fig. 12) after rising a short way comes in front of the jamb C as shown at B, and in an elevation drawing would hide it. As it is seen from the church floor of course it does not have that effect, for you look up behind it.

Object of stilting wall-rib

Mr Moore seems to think that this stilting of the wall-rib, so that the panel of ashlaring next the wall rises vertically for some height instead of spreading laterally along the wall, and thereby reduces the width of the conoid of vaulting where it reaches the wall, is a mode

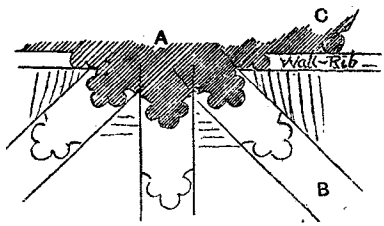


Fig. 12.

of confining the thrust of the vault against the side wall to the area of support given by the buttress outside. In this he is mistaken. The two panels next the wall exercise no thrust upon it whatever, and would stand without it. At Winchester the outer wall had settled and parted from the vault, so that there was a longitudinal crack through which you could look down into the church for the whole length of the aisle between the wall and the vault, which showed no tendency to follow the wall in its movement. At Worcester, where the vaulting is somewhat irregular, the ashlaring seems never to have been made up to the wall, but leaves an interval on the top of the wall-rib. The stilting of the panels has no

other object but that of giving more room for the clerestory windows.

Owing to this stilting the panel BC (Fig. 12) has a strongly winding soffit in order to recover its proper position at the crown. In a quadripartite vault, such as we have hitherto been dealing with, this position would be at right angles to the side wall and the axis of the building; but at Sens we have not a quadripartite but a different kind of vault, which requires explanation.

The sexpartite vault

It will be remembered that at S. Ambrogio the nave was divided into square bays twice as wide as those of the aisle, so that one bay of the nave occupied the length of two in the aisle. The square bays of the nave were covered with a simple quadripartite vault, and the piers were alternately larger and smaller according to their load. Something like this was attempted at S. Etienne,

Abbaye aux Hommes, Caen

or the Abbaye aux Hommes in Caen, which was built by William the Conqueror in 1066. Originally only the aisles were vaulted, and the nave and triforium had wooden roofs. For some reason not very clear, the

Alternation of piers

piers were alternated as at S. Ambrogio, larger and smaller, the larger having a pilaster and shaft on the front to the nave, the lesser only the shaft. In both cases the shafts ran to the top of the wall to receive the tie-beams of the wooden roof. The reason for this alternation at S. Ambrogio has been explained: but it has no meaning in an unvaulted church, and one wonders whether Lanfranc of Pavia, the first abbot, was influenced simply by recollection of a familiar Milanese building[1]. In the 12th century the wooden roofs at S. Etienne were superseded by vaults; the wall shafts were cut down and

[1] M. de Lasteyrie, however, maintains that the church at Caen is the earlier of the two. *Archit. Relig. en France à l'Époque Romane*, p. 260.

the capitals refixed at a lower level to receive the springing of the nave vaults, and quadrant barrel vaults were turned over the triforium, as in the churches of Auvergne, to give abutment. The nave had a quadripartite vault over the square double bay, like that at S. Ambrogio, with regular diagonal ribs, but apparently the architect did not trust it, and from the intermediate shaft he threw a transverse rib meeting at the crown the intersection of the two diagonals. On the back of this

The sexpartite vault

The intermediate transverse rib

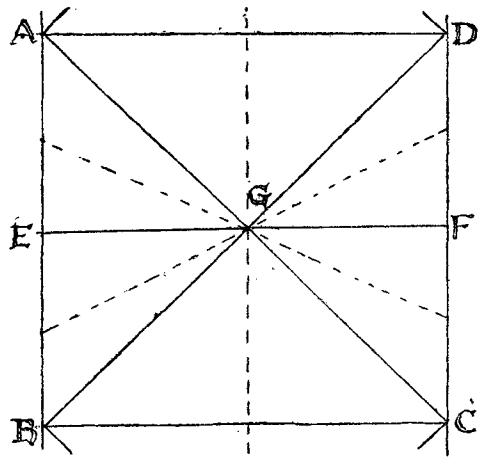


Fig. 13.

he raised a thin wall for some height and then spread it out with vaulting surfaces right and left to meet those of the main vaults. The two pockets or cells thus formed described an ellipse on the main walls, and their crown naturally ran obliquely towards the centre of the main vault where the various ribs met. In Fig. 13 AD and BC are the transverse arches dividing the bays, and AC and BD are the diagonals: EF is the intruded transverse arch, G the common point of intersection, and

Abbaye aux Hommes, Caen

the dotted lines show the direction of the crowns of the several cells or pockets. The effect of this construction is shown in Fig. 14. The diagonals cut very much in front of the clerestory, all the more because they are

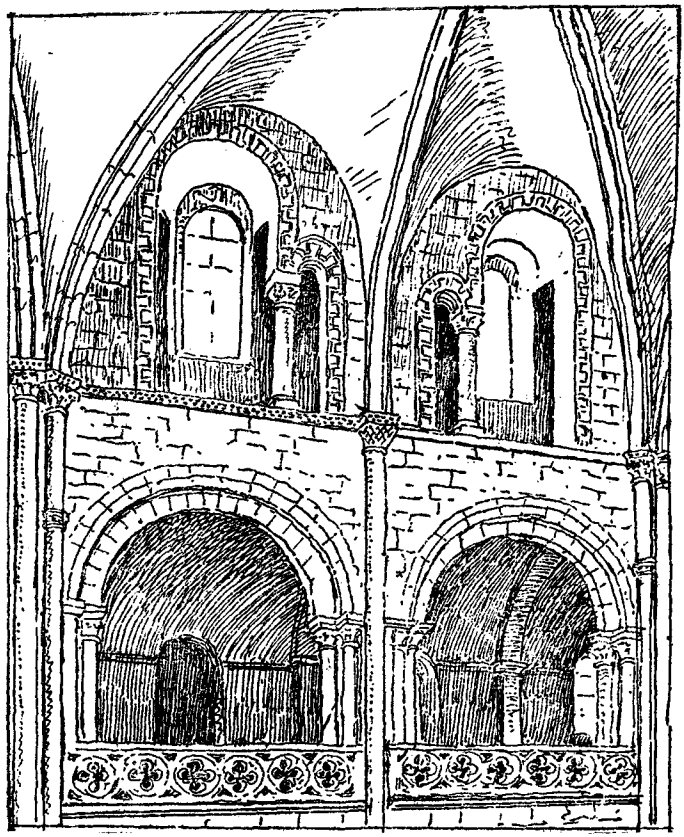


Fig. 14.

segmental, struck from a point below the springing, a device no doubt to avoid a domical crown; and the surfaces of the panels are very winding.

In the vault of the Abbaye aux Dames at Caen

this is avoided by not turning any vault from the intermediate transverse EF, but simply building a thin wall on the back of the rib up to the soffit of a regular quadripartite vault. This however is more like shoring than vaulting. Abbaye aux Dames, Caen

These are perhaps the first examples of the sexpartite vault, which occurs frequently in early Gothic churches, as for instance at Sens (*v. sup.* p. 38, Plate I) where the alternation of the piers according to their office is very remarkable. The main piers are clustered, and are massive, having besides the members that carry the nave arcade and the aisle vaults a group of shafts in front which rises to receive the transverse and diagonal ribs of the high vault. The intermediate piers on the contrary consist of a pair of columns placed one behind the other like those in S. Costanza at Rome[1], which may possibly have given the suggestion for them. These receive the nave arches and the aisle vaults, and from their capital rises a slender shaft which runs up to take the intermediate rib, which converts the quadripartite vault into a sexpartite. Sens Cathedral

In the composition of the great piers the relation of the support to the load is logically expressed: each rib of the vault has its own shaft to carry it, and each of the two orders of the nave arcade has its own proper shaft below. Relation of pier to load

In no part of the vaulting of a church was the new system of construction with rib and panel found more convenient than in the circular ambulatory that surrounded the apse and in the apsidal chapels opening from it. On this irregular plan, where no two arches in the circular walls of the bay were equal, and no two sets of vaulting surfaces were alike, the intersecting lines of Vaulting on circular plan

[1] Illustrated in my *Byz. and Romanesque Architecture*, vol. I. plate XLIV.

unequal cylindrical and sometimes conoid surfaces were distorted and twisted so much as to be not only unsightly but insecure. Fig. 15 shows the effect of these inter-

Brioude

penetrations in the vaulting of the ambulatory at Brioude in Auvergne, which could only be made safe by very careful masonry at the groining lines involving difficult geometrical problems, for every stone had to be accurately shaped to a different winding plane. This difficulty disappeared when ribs of a true arch form were turned

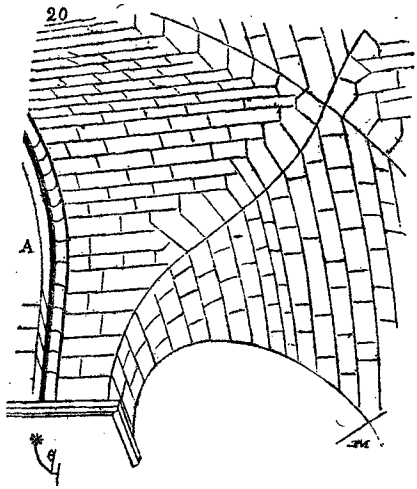


Fig. 15 from V.-le-Duc.

from point to point, and the irregular winding of the panels between them was not only disguised by the regular curve of the ribs, but became of little consequence; for the panels being relieved of any structural duty, had only to carry themselves, and could repose securely on the skeleton of the ribs.

Aisle vaults at S. Denis

In Fig. 16 is shown the plan of one bay of the ambulatory with its apsidal chapel at S. Denis, where

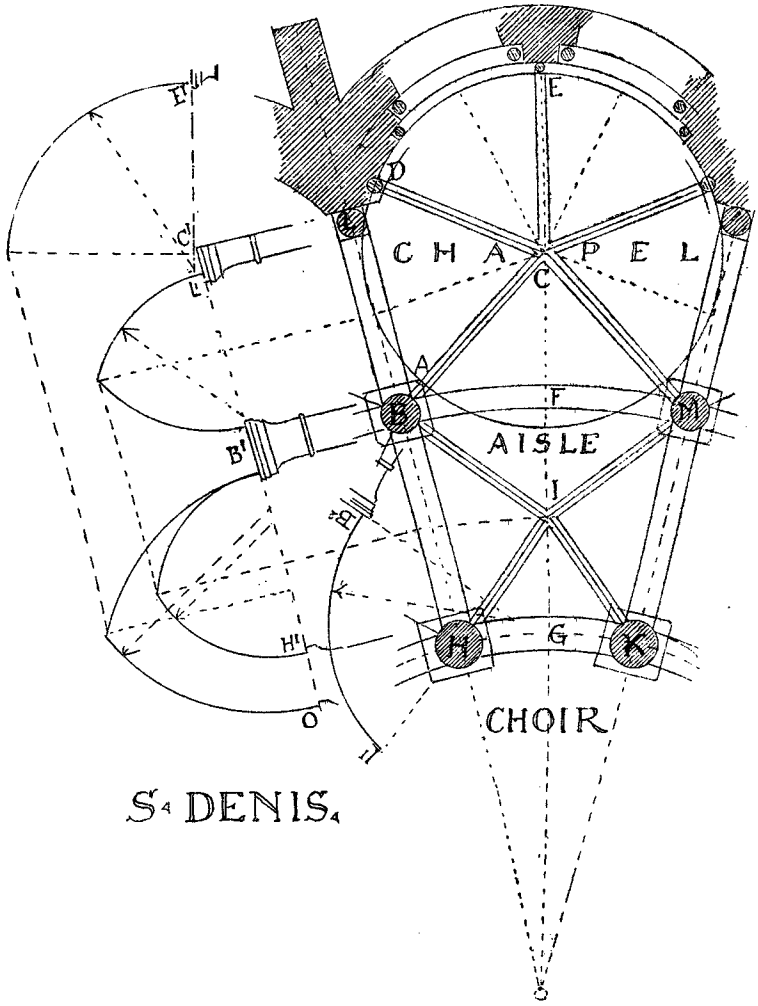


Fig. 16 adapted from V.-le-Duc

Aisle vaults at S. Denis

there are two aisles round the great apse of the choir, the outer one being in fact absorbed into the chapel. I take the description of these vaults from Viollet-le-Duc, who restored the church in 1859[1]. "The circumference of the interior circle which defines the chapel meets the abacus of the cylindrical column at A so that the diagonal arches AC, DC, EC are equal. Having drawn the transverse arch F and the archivolt G" (which carries the main apse of the choir), "the architect takes the middle of the axis GF at I and draws the two diagonals BIK, HIM and the transverse arches HB, BL. It is clear that all these arches are independent, and the architect may please himself in fixing their springing. But,—and here the necessary consequences of the new system show themselves,—had he made these arches semicircular their springing would have had to be at various heights if they were to come to a level at their crown, since they are of various spans, and there would have arisen the old trouble in filling in the triangular vaulting spaces. Or again had the arches all been made to spring at one level they would not have been level at the crown. The architect therefore employed the pointed arch which gives him full liberty to bring the crowns to the convenient level. So the elevation shows the transverse LB at L′B′ and BH at B′H′; at C′E′ one diagonal rib of the chapel, at OB′ the transverse arch BFM, and at B^2I' the rib BI. The result is that the crowns CFI are level; and the crowns of the transverse arches BH, BL are also level with one another, though lower than CFI. It remains to fill in the triangular vaults which repose on these pointed arches. The lines of the crowns of these fillings-in necessarily abut on the point of each of these

[1] V.-le-Duc, *Dict. Rais.* IX. 505.

arches as the dotted lines show, and they meet on the axial line CG."

The perfection of this system of vaulting at S. Denis was only reached after many tentative experiments. It was some time before the builders, with the tradition of Roman cross-vaulting still strong within them, grasped the idea of the full liberty at their disposal, and dismissed from their minds the theory that a vault necessarily results from the intersection of simple curved surfaces. At first, as at Morienval, the diagonal ribs were not drawn straight but on a curved line, such as would have resulted from the intersection of two barrel vaults on a circular plan. At Langres, being used to diagonal intersections in one plane, they drew the diagonal ribs in a straight line (Fig. 17) from A to D, and C to B with the result that the point of intersection was not over the middle of the aisle but near one side of it with a very awkward effect. There is another instance of this in the South Choir aisle of S. Pierre at Chartres. This was remedied when the discovery was made that the two

Persistence of Roman tradition of vaulting

Morienval

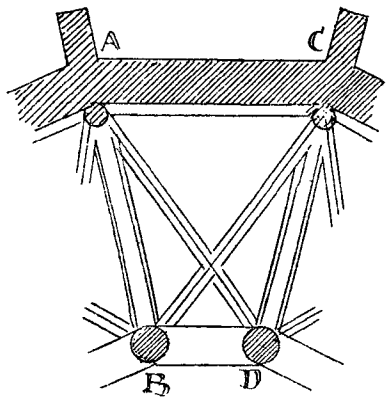


Fig. 17.

Langres Cathedral

halves of the diagonal need not lie in one plane but might meet at an angle as BI—IK in Fig. 16. It is unnecessary to go into these experiments in detail for our present purpose[1]. Whatever approach may have been made towards a more scientific system of vaulting before, it is at S. Denis, and in 1140, that we find it perfected, and the theory of Gothic vaulted construction fully developed probably for the first time, unless as some suppose the work at Sens, which is similar, is slightly earlier.

Gothic vault perfected at S. Denis

To the invention of ribbed vaulting, which allowed the wall-arch to be raised to the level of the rest,—though in fact it was often kept slightly lower, causing the transverse section of the vault to be arched from side to side,—is due the possibility of large clerestory windows, and this involved further provision being made for exterior support.

Difficulty arising from clerestory

In Romanesque buildings either there was no clerestory or it was of insignificant dimensions. At S. Ambrogio in Milan, nave and aisle are under one unbroken slope of roof, and a clerestory is impossible (Fig. 6, *v. sup.* p. 28). It was the same in the churches of Auvergne and Toulouse, where the barrel vaults of the nave are abutted by quadrant vaults in the aisle, both being under one roof as at S. Ambrogio. At Vézelay, where perhaps the nave was cross-vaulted for the first time, a clerestory window is accomplished but it is kept low, the wall-arch being not so high as the rest. But now there was nothing to prevent the clerestory being of the full width of the wall-arch of the vault, and as high as the space between the

Buttressing at S. Ambrogio

In Auvergne

At Vézelay

[1] *v.* Viollet-le-Duc, *Dict. Rais.* vol. IV. "Construction," vol. IX. "Voûte." The history of the development of vaulting in France is carefully traced by Mr Moore, in his *Development and character of Gothic Architecture.*

roof over the triforium and the crown of the vault, provided only proper support could be given to the upper storey.

Buttressing where no aisles

When there was no aisle it was easy enough to apply an exterior buttress against each point where the thrust was concentrated, as was done at King's College Chapel, Cambridge, the Sainte Chapelle in Paris, the western side of the great transept at Salisbury, the eastern bays at Southwell and Rochester and the eastern transept at Durham. The difficulty arose when there was an aisle, which removed the buttress pier from the main wall to the outside wall of the aisle. This difficulty was met by the invention of the flying buttress to bridge across the aisle and reach the main wall of the clerestory stage at the proper spot to receive and resist the thrust of the high vaults.

The flying buttress

A diagram will explain the nature of this structure (Fig. 18). The dotted line AB shows the direction of the thrust of the high vault outwards, and CD that of the aisle vault inwards. If not resisted their effect would be to force the upper part of the wall out, and the lower part inwards[1]. A thrust may be defeated in two ways: you may either annihilate it or divert it. The lower thrust CD is annihilated by the enormous load of the superstructure which overpowers it by direct vertical pressure: the upper is partly diverted by means of the flying buttress to the great buttress pier E, and partly converted into a downward direction by the thrust of the flying buttress at F. Everything depends on the immobility of this great pier E, which is the ultimate *point d'appui* in which all the conflicting forces find rest.

Thrust annihilated

Thrust diverted

Immobility of buttress pier

[1] This actually happened at S. Thomas's Church, Portsmouth, which it fell to my lot to repair.

From this pier the nave vault might be stayed by a single prop of timber without any flying buttress, and in fact when we are called upon to rebuild a flying buttress what we do is to supply its place temporarily with just such a prop. But the stone arch EF is something more than a prop: for were the nave wall away it is obvious

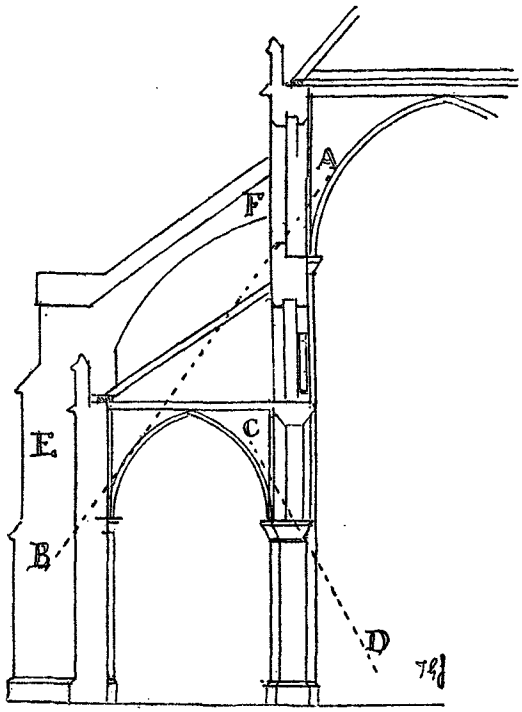


Fig. 18.

Inward thrust of flying buttress

the arch would fall inwards towards the nave by its own weight. This weight therefore constitutes a thrust against the nave wall,—for thrust after all is only a matter of weight,—and this helps to divert the thrust AB into a more vertical direction which is of course more easily resisted. It is curious that this inward thrust of the

flying buttress, which surely is of value, does not seem to have been appreciated by the French architects, who often put a small shaft close against the nave wall to support the head of the flying arch at F, thereby preventing it from exercising any pressure on the wall, and treating it merely as a prop to convey the thrust upon the great buttress pier E[1].

End of Roman tradition

Arrived at this point Gothic architecture may be considered to have shaken off the last traces of Roman tradition. It was bound by no formula of module and minute, by no stereotyped plan for house or temple, by no conventional rules of construction, plan, or design. Its only laws were those of nature,—of statics and geometry, of convenience and economy. It gave free scope to the individuality of the artist as well as to the manner of the school in which he was trained. He was as free as air to indulge his own imagination, to devise ever fresh methods of construction, and ever fresh modes of expression. The result was a style which is ever surprising us with designs that are never stale but always fresh and new, and that constantly astonish us with their infinite variety. The artist was bound only by obedience to the three great canons which all good styles must obey: his construction must be sound, his work be economically contrived, and his design must reflect and

Individuality of the artist

The *general* canons of architecture

[1] A curious instance of the inward thrust of a flying buttress is afforded by what happened at Bath Abbey. The nave, though designed for vaulting, was left in the 17th century with a wooden ceiling, but in 1833 flying buttresses imitating those of the choir were placed on both sides of the nave, which it is said began to push the wall in. The nave had its present fan vault constructed by Sir Gilbert Scott about the middle of the 19th century to resist this inward thrust, but the vault began to overpower the buttresses, which buckled and threatened disaster. On examination I found they were hollow, and had to take them out and reconstruct them. But though too infirm for their work their unresisted thrust had been too much for the walls.

express aesthetically the conditions under which he worked. From these *general* principles, applied to the circumstances of the Middle Ages, were evolved the *particular* principles which have been explained in the preceding chapters, and which differentiate the new style from all that had gone before it; (1) concentration of thrusts and supports and articulation of the structure more fully developed than in Roman work; (2) subordination of orders, which was an entirely novel feature; (3) freedom of arched construction by the introduction of the pointed arch and the system of rib and panel vaulting; and (4) correspondence between the load and its supports logically expressed. This seems to me to be as near a definition of Gothic architecture as the subject admits.

The *particular* canons of Gothic

Hitherto we have dealt almost entirely with construction, because without understanding that the style cannot be understood at all. In no other style has the constructive problem played so large a part. It was necessary to explain it in some detail before coming to the more aesthetic part of the subject, because that depends largely on the former and without some clear knowledge of it would be unintelligible.

Appreciation of construction necessary

CHAPTER IV

EARLY FRENCH GOTHIC

THE TRANSITIONAL PERIOD

Character of the 13th century

THE 13th century, in which Gothic architecture was fully developed and reached its prime, has been described by one philosopher,—I think it is Leibnitz,—as the stupid century. With Innocent III at the beginning, and Boniface VIII at the close of the period, it was the time when ecclesiastical pretensions reached their zenith, and when the Church claimed supremacy in every sphere of public politics as well as of private life; when thrones and dominions were held to be at its disposal, and when the clergy were placed above the reach of the common law. It was the age of what Gibbon calls "the most signal triumph over sense and humanity, the establishment of transubstantiation and the origin of the Inquisition." It was the age of Christian persecution of Christian, of the inhuman crusade against the Albigenses, which deluged the most flourishing and civilized part of France with blood, and reduced it to a desert.

The growth of liberty

But it was also the age of the growth of more liberal opinions, and of civil liberty. In our own country, if it was disgraced by the surrender of John to the Pope, it was also the age of Stephen Langton and the Great Charter; of Grostête; of the younger Simon de Montfort and the development of better justice and more regular

Parliamentary institutions; of the growth of Oxford; of Roger Bacon, and the beginning of secular learning. In Italy, which then led the world in art and letters, it was the age of Frederick II, *stupor mundi*, perhaps the most interesting figure in the middle ages, to which indeed he hardly seems to belong. The free communes in the plain of the Po, rejoicing in their liberties won at Legnano, were raising their town halls and cathedrals as monuments of civic greatness, rivalling and fighting one another till fear of Frederick drew them together into the second league of Lombardy. Venice, Genoa, and Pisa controlled the commerce of the world. Florence had raised those second walls to enclose a larger city, which Dante bewails as the beginning of her moral decline; and the simplicity of Bellincion Berti with his belt of leather and buttons of bone, and his wife who could leave her mirror with face unpainted, had begun to yield to the growth of wealth and luxury[1]. It was the age of the birth of Italian poetry. Dante traces the origin of the true Italian language to the court of Frederick, whose chancellor, Peter De Vinea, is said to have been the father of the Italian sonnet; and the end of the century produced the history of Villani and the *Vita Nuova*, to be followed by the *Divina Commedia* itself.

The Italian Communes

As in Lombardy, so in France, England, Germany and Flanders the communes had already in great measure achieved municipal liberty during the 12th century, everywhere encouraged more or less directly by the crown to balance the power of the feudal nobles. In France Beauvais acquired communal rights in 1099, to which the bishop took the oath. At Noyon the bishop granted a charter, which he asked the king to confirm.

Communal growth in the rest of Europe

The French Communes

[1] *Paradiso*, XV. 112.

Mantes demanded one of the king, who was its feudal lord. Laon in 1111, excited by the example of Noyon and S. Quentin, revolted against its bishop. It had always been a turbulent city, where "brigandage was endemic." Nobles oppressed the burghers, the burghers trampled on the commons, and the bishop tyrannized over all. The bishop was bribed to consent to a charter, and when Louis Le Gros visited the town he was offered 400 livres to confirm it. The bishop however outbid the townsmen with 700. Louis retired in time to avoid the outbreak, but the townsmen stormed the palace and murdered the bishop, whom they found hidden in a tub; clerks and nobles had to escape by flight, women of the town despoiled the ladies, and the cathedral was burned. The king returned and sacked the town, but the commune was re-established in 1128. Amiens after a four years' war gained her liberty in 1117; S. Riquier in 1126; Soissons between 1116 and 1126; Abbeville in 1130; Reims in 1139. In 1146 Sens was granted a charter by Louis VII which was revoked three years later: upon which the citizens rose and murdered the abbot of S. Vif and his nephew. At Vézelay the townsmen in alliance with the Count of Nevers triumphed over the abbey in 1136, but the alliance prevented their achieving complete liberty.

The French Communes

That the movement should be hated by the clergy, especially the regulars, was natural. "Commune," cried the Abbot Guibert of Nogent, in holy horror, "name novel, name detestable."[1] It was in the towns that the new lay spirit of liberty flourished. "Everywhere they revolted against bishop, abbot and chapter. They braved the curses of popes; they could only grow at the expense

[1] Lavisse, *Histoire de France*, vol. II. p. 349.

of powers local and general, and of the Church. It is by the emancipated bourgeoisie that the laic spirit arrived at modifying from top to bottom the character not only of public powers and social relations, but also of the literature and intellectual life of the country[1]."

It was the beginning of the reign of freedom in thought as well as in politics. The ground thus gained was never lost, and in this period were sown the seeds of the great revolutions of the 16th century. For though the pretensions of the Church never rose higher than in the 13th century, they contained already the seeds of decay.

Ile de France the cradle of Gothic

It was in France, and in the royal domain of the Ile de France chiefly, that the transition from Romanesque to Gothic began, and it is with that school that we had best begin the account of the new style.

The importance of the crown had grown steadily in the 12th century under Louis le Gros, and Louis le Jeune, and in the 13th century the new royalty was consolidated by Philip Augustus, who added to the old territory of the Ile de France the provinces forfeited by John of England. Then took place that astonishing burst of cathedral building which has no parallel except the great building period in England that followed the Norman Conquest, or the development of railways in our own day. During the reign of Philip, from 1180 to 1223, were founded the

The French cathedrals

cathedrals of Paris, Chartres, Bourges, Laon, Soissons, Meaux, Noyon, Amiens, Rouen, Cambrai, Arras, Tours, Seez, Coutances, and Bayeux, and before the end of the century they were nearly all finished.

What was the meaning of this extraordinary movement? It had, probably, two causes: the decline of

[1] Lavisse, *Histoire de France*, vol. II. p. 356.

monastic influence, and the rise of the communes. For long there had been antagonism between the regular and secular clergy. Till the end of the 12th century the monks stood first in popular esteem. The life of the cloister was thought the higher life; the monks had charge of education, and were the repositories of learning, and from their ranks men like Suger were chosen to fill great offices of state. Pontifical bulls favoured them at the expense of the bishops, from whose jurisdiction they had obtained exemption. This had always been a sore grievance and led to constant quarrels. The Bishop of Orleans in 987 tried to gather the vintage from land claimed by the Abbot of S. Benoit, and when prevented his men waylaid the abbot and abused him, killing some of his men. Fulques, Bishop of Orleans in 1008, tried to enter the monastery of Fleuri: the monks resisted, and beat some of his men to death. An episcopal council at S. Denis in 995 was routed by the vassals of the abbey, and the archbishop was wounded and barely escaped with life. In 1069 Hugh, Bishop of Langres, burned the abbey of Pothieres, to which he had been refused admission[1]. The men of Vézelay with the countenance of the Count of Nevers sacked the monastery, and the Pope wrote to charge the Bishop of Autun with having instigated the outrage[2]. The abbeys had become great feudalists with enormous revenues. Their churches far outshone the cathedrals, which till the end of the 12th century were of modest dimensions like those of Avignon, Arles, Autun, and other places where the old cathedrals have survived. At Périgueux the cathedral of S. Etienne was a very humble affair compared with

Decline of monasticism

Antagonism of regular and secular clergy

Early inferiority of cathedrals to abbeys

[1] Lavisse, *Histoire de France*, vol. II. p. 339, etc.

[2] D'Achery, *Spicilegium Hist. Vizeliacensis*, Lib. I. Epist. XVII.

the great abbey of S. Front. No church this side the Alps could compare with the vast abbey of Cluny.

Popularity of the new cathedrals

The bishops were ready to take advantage of the decline of monastic influence, and the rise of the communes gave them their opportunity. Not that we are to credit them with any democratic sympathies. As great feudal lords the bishops were no less antagonistic to the commune than the nobles and the abbeys. But the achievement of civil liberty inspired in the citizens the passion to adorn their city with buildings that should surpass those of their neighbours. So it was, we know, in Italy and so it would seem to have been in France. The old cathedrals were condemned and thrown down, and on their ruins men set to work to build something far finer. With this object in view bishop and commune could cooperate, however much they differed otherwise. Policy caused bishops, like those of Beauvais and Noyon, to grant charters and swear to the commune, however much they may have disliked it. The bishop no doubt was the main mover in the pious work, and probably the largest contributor to the expense: Maurice de Sully is said by a contemporary to have built the cathedral of Paris much more at his own cost than by gifts from outside. But in most cases the bulk of the money must have come from the people, as it had done previously in the rebuilding of the Abbeys. The contemporary account of Ordericus Vitalis[1] implies the cooperation of the monks and "the faithful" in the time of King Henry I, and there would seem to have been the same between bishop and people in the case of the secular

Cooperation of bishop and laity

[1] Omnis enim ordo Religiosorum, pace fruens et prosperitate, in omnibus quae ad cultum Deitatis pertinent omnipotentissimae intus et exterius suam diligentiam satagit exhibere. Unde templa domosque fervens fidelium devotio praesumit prosternere, eademque melioranda renovando iterare. *Hist. lib.* x.

rebuilding. Rebellious and turbulent Laon began the new cathedral within 45 years from the confirmation of her liberties[1]. Within a century after their achievement of freedom all the great cities in the royal domain had rebuilt or were rebuilding their cathedrals, and this must be something more than a coincidence. It is remarkable, and significant of the cooperation of bishop and commune in the pious work, that some of the grandest among the new cathedrals are in towns like Laon where the bishops had formerly been most fiercely opposed[2].

The lay architect

The architects were now laymen; in the early Romanesque period they had been monks, though not necessarily, nor perhaps usually, in holy orders. In those troublous times it was only in the shelter of the cloister that the arts could survive, and the monks had to be their own builders. But this had long ceased to be the rule. It is true that only a few names of architects during the 11th and 12th centuries have been preserved, but those whose names have survived seem to have been laymen. In the 13th century it is still rarer to find a name, for the monks were the only historians, and took no interest in secular buildings or builders. But in Italy, where the artist's name more generally survives, they are all laymen, and so are those whose names have been preserved in France during this period[3].

[1] Luchaire says it was begun about 1170, others put it 20 years later.

[2] It is curious that M. Luchaire should draw an opposite conclusion from this fact.

[3] M. de Lasteyrie mentions Isembardus at Bernay, Rencon at Tournus, Umbertus at S. Benoit sur Loire, in the 11th century, and in the 12th, Renoldus at S. Savin, Brunus at S. Gilles, Gofredus at Chauvigny, Gilebertus and Gelduinus at S. Sernin Toulouse, Willelmus Martini at S. Andrè le bas Vienne, Constantin de Jarnac at S. Etienne Périgueux, Giraud Audebert at S. Hilaire de Foussay, Rogerus at Chartres Cathedral. Monkish artists, he says, are always styled *Frater*, etc. *Archit. Relig. en France à l'Époque Romane*, p. 237.

S. Denis

In the abbey church of S. DENIS (Fig. 19), we first find something like a fully developed Gothic construction.

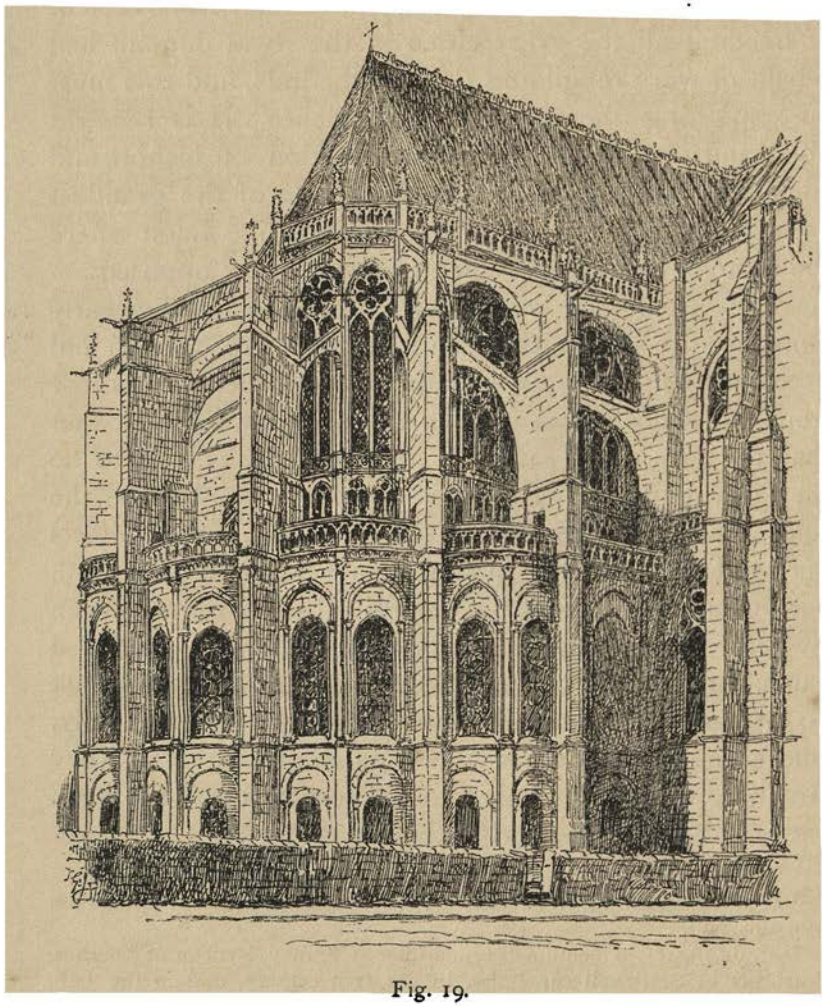


Fig. 19.

This is so well understood, and the work is so intelligently planned on the new system, that it is obviously the outcome of continued experiment, and the climax of a series

of less perfect predecessors; but the general opinion cannot be far wrong that here for the first time, at all events on a grand scale, we find the development of Gothic architecture. S. Denis

The old church of Dagobert, founded in 625, had been reconstructed by Pepin-le-Bref, and apparently again rebuilt in the 11th century. It was however still small and inconvenient. Suger says, we would fain hope with picturesque exaggeration, that "the women with much pain, clamour, and tumult ran to the altar over the men's heads as it were on a pavement[1]." The new church was built with extraordinary and, as it has turned out, injudicious speed. Viollet-le-Duc suggests that Suger, conscious of the decline of monasticism, was in a hurry to show to the world an abbey in the van of progress, instead of decrying the splendours of art with the austere Cistercians. His rebuilding began at the west end which was consecrated with much ceremony in 1140, as he recorded by what he calls an "Epitaph," concluding with the lines: The west end

Annus millenus et centenus quadragenus
Annus erat Verbi, quando sacrata fuit.

In the same year he began rebuilding at the east end, which from crypt to topmost vault he finished in three years and three months, as he recorded by a repetition of his Epitaph, substituting the word *quartus* for *annus* in the second line. The east end

The body of the church was next attacked, in order that it might be conformable and worthy of the two new ends. But here I gather he did not entirely pull down The nave

[1] *Gesta Sugerii Abbatis*, cap. XXV.

the old fabric[1]. This part of his work, however, has not come down to us: the bulk of the church was rebuilt from the designs of Pierre de Montereau between 1231 and 1281, and of Suger's building we have only the eastern ambulatory aisle with the chapels, the crypt, and the west front with the two bays next to it. The whole church has been so much pulled about by successive restorations, and undoing of restorations, and restoring afresh, that it is very difficult to make sure

Remains of Suger's work

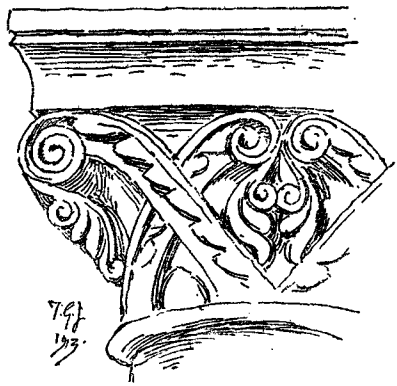


Fig. 20.

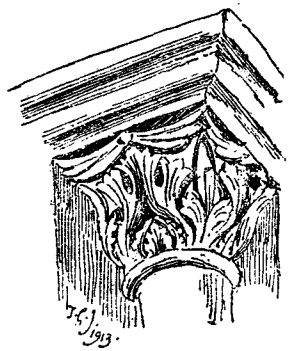


Fig. 21.

of any detail or to found any argument upon it. In the part which can be referred with any certainty to Suger round and pointed arches both appear, and though the pointed arch rules the construction of the upper part, that of the crypt is more primitive. The bays in the crypt are divided by plain transverse ribs which are round-arched, and there are no diagonals, the arris of the groin being slightly pinched up: but the longitudinal arches from pier to pier are pointed. The central part under the choir is surrounded by a solid wall in which is

The crypt

[1] Reservata tamen quantacumque portione de parietibus antiquis, quibus summus Pontifex Jesus Christus testimonio antiquorum scriptorum manum apposuerat. *Gesta Sugerii*, cap. XXIX.

some Romanesque arcading, remains of a church older than Suger's time, perhaps dating from the rebuilding in the 11th century. The inner columns of his ambulatory stand away from this wall, and are joined to it by narrow pointed arches. The apsidal chapels have shafts in the

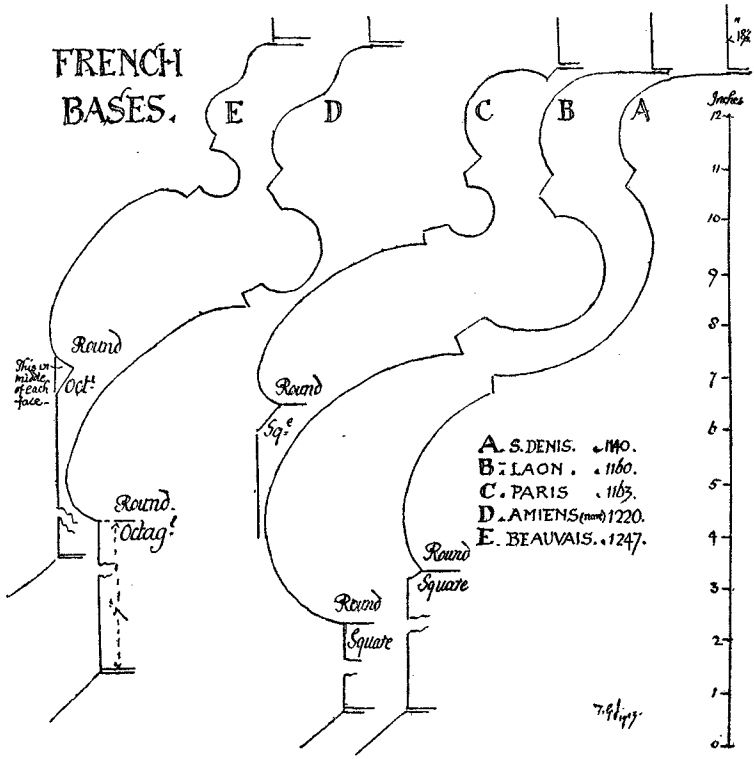


Fig. 22.

angles, united by round arches, and the groins radiate to the centre of the vault without any ribs at all. The capitals of the main columns seem all to have been renewed or at all events scraped, and it is difficult to feel sure of the genuineness of any one (Fig. 20). The little

capitals of the jamb shafts of the windows, however, are untouched here as in the chapels above (Fig. 21).

S. Denis. The choir

Suger's choir ends in an apse (Fig. 19), raised over the crypt and reached on each side by a flight of several steps. The French type of *chevet* with an ambulatory

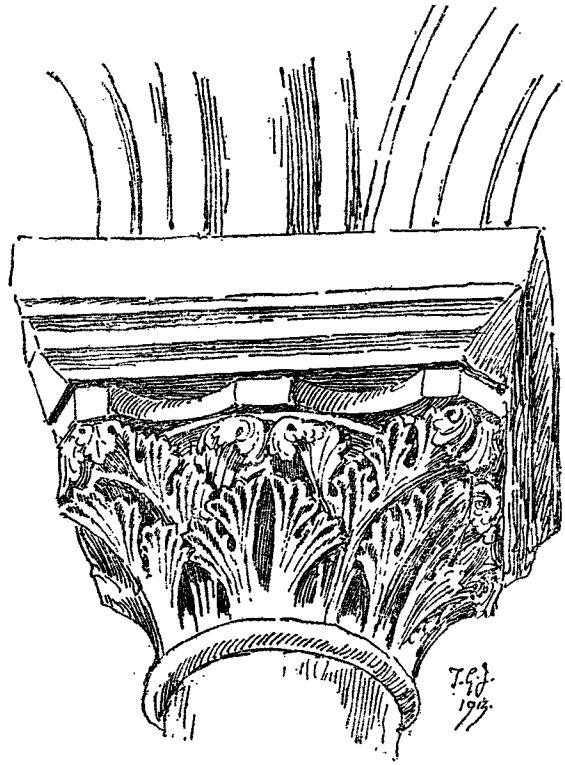


Fig. 23.

and radiating chapels is completely developed, and the vaulting is planned and constructed with perfect knowledge and skill (*v. sup.* Fig. 16, p. 45). The double aisle is divided by monocylindrical columns 18½″ in diameter with tall wide-spreading bases (Fig. 22 A), on a

plinth which is square with the corners cut off. The torus of the base has very primitive toes at the angles. The capitals (Fig. 23) are very Byzantine in character, with the leaves sharply raffled, and laid within one another. The main columns of the apse, on the other hand, have capitals *à crochet* and bases moulded like those at Amiens and Beauvais (Fig. 22 D and E), and have attached shafts,—triple in the straight bay and single in those round the curve. They run up to the later work above and are in the solid of the column, from which I suppose that Pierre de Montereau inserted new apse columns in the place of Suger's, when rebuilding the upper part. S. Denis

The chapels (Figs. 16 and 21) have two plain wide pointed windows each, with jamb shafts which have preserved their original capitals of a Byzantine type (Fig. 21). The shafts are detached and tied in with bronze rings. In the early narthex between the towers of the west front, which is also Suger's work, all the capitals have Byzantine foliage. The diagonal ribs are semi-circular and heavily moulded with rolls, and the Byzantine capitals are set obliquely to receive them, but all the other arches are pointed. The chapels

The west portals were richly carved with Romanesque scrolls, diapers, and figures, but though here and there an old fragment may be recognized the greater part is modern imitation, and therefore of little historical value. The middle and right hand portals were hung by Suger with new doors of bronze, modelled with scriptural subjects. In the left hand portal Suger re-hung the old doors, underneath a mosaic picture, which, he says, "though contrary to the new fashion I caused to be made here, and fixed in the arch of the doorway." This mosaic lasted till the 18th century when it was displaced for West portals

S. Denis

a modern sculpture by Brun[1]. Suger's aim, as he elsewhere tells us, was to rival the splendour of the Eastern basilicas[2] with their wealth of gold, mosaic, and precious stones. In the Musée de Cluny are some mosaics from S. Denis, labelled "*art Italien sur dessin Français. XII siècle.*" There are griffins and monsters within interlacing borders, but the interlacing patterns are not like any in Byzantine or Italo-Byzantine art, and this justifies the description on the label. They are all of glass, from which, and also from the fact that the beasts are all one way up, I conclude they were mural[3], and some of them may possibly have been in the tympanum of the doorway mentioned above. Among them, within a circle, is a kneeling figure of a monk in colour on a gold ground, with an abbreviated inscription which I read thus: HOC PATER ALBRICVS NOBILE FECIT OPVS. On a border round the circle is another inscription in two elegiac lines:

The mosaic

+ QVI TE DEVOTVS ORO CVI SERVIO TOTVS
+ MARTYR SCE DEI QVESO MEMENTO MEI.

The towers

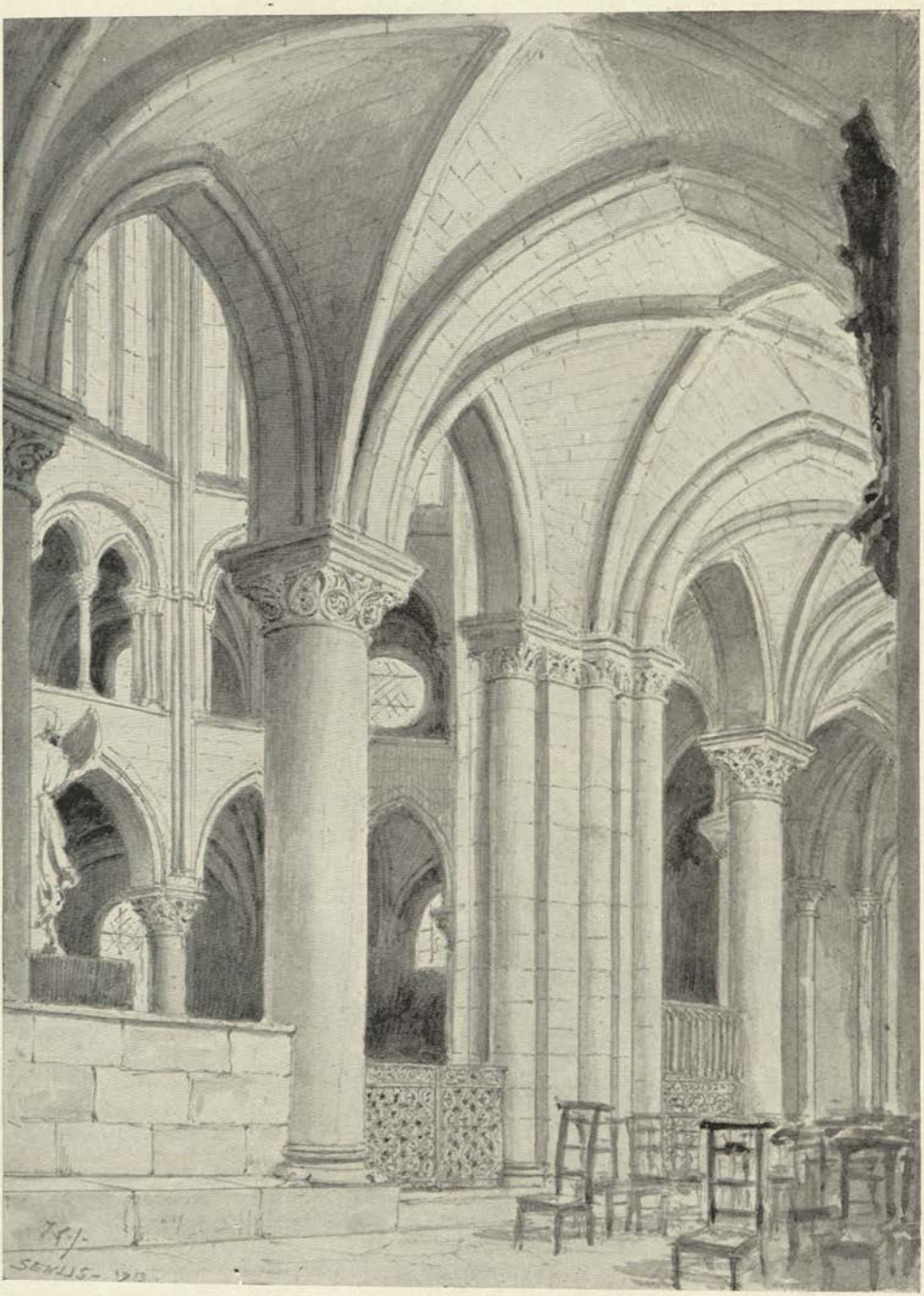
About 1200 the north-west tower, which had till then a spire of wood, received one of stone. It is to be seen in old prints, and is illustrated by Viollet-le-Duc[4], who tells us that it was his sad lot to have to take it down to prevent its falling. It was never rebuilt, and the only tower at present is the sister one at the south-west angle

[1] MM. Vitry and Brière, *L'Église Abbatiale de S. Denis*, p. 53.

[2] Conferre consuevi cum Hierosolymitanis, et gradissime addiscere quibus Constantinopolitanae patuerunt gazae et Sanctae Sophiae ornamenta, utrum ad comparationes illorum haec aliquid valere deberent. *Gesta Sugerii Abbatis*, cap. XXXII.

[3] MM. Vitry and Brière (*op. cit.* p. 67) suppose them to have been in the pavement, for which they are quite unfit.

[4] *Dict. Rais.* vol. v. pp. 435—438.



T. G. J.

SENLIS—The Choir

of the façade. The vanished spire had triangular taber- S. Denis
nacles at the corners of the tower, and gabled spire-lights between. The spirelets of these eight structures had the front face upright and the back sloped. This device occurs also in the spire at Senlis, which I imagine must

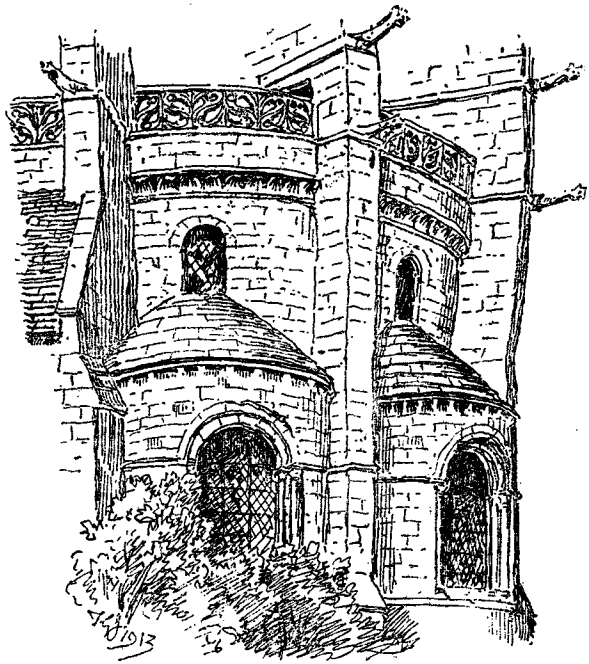


Fig. 24.

have been by the same architect, with the very unhappy effect of making these pinnacles seem to bulge outwards.

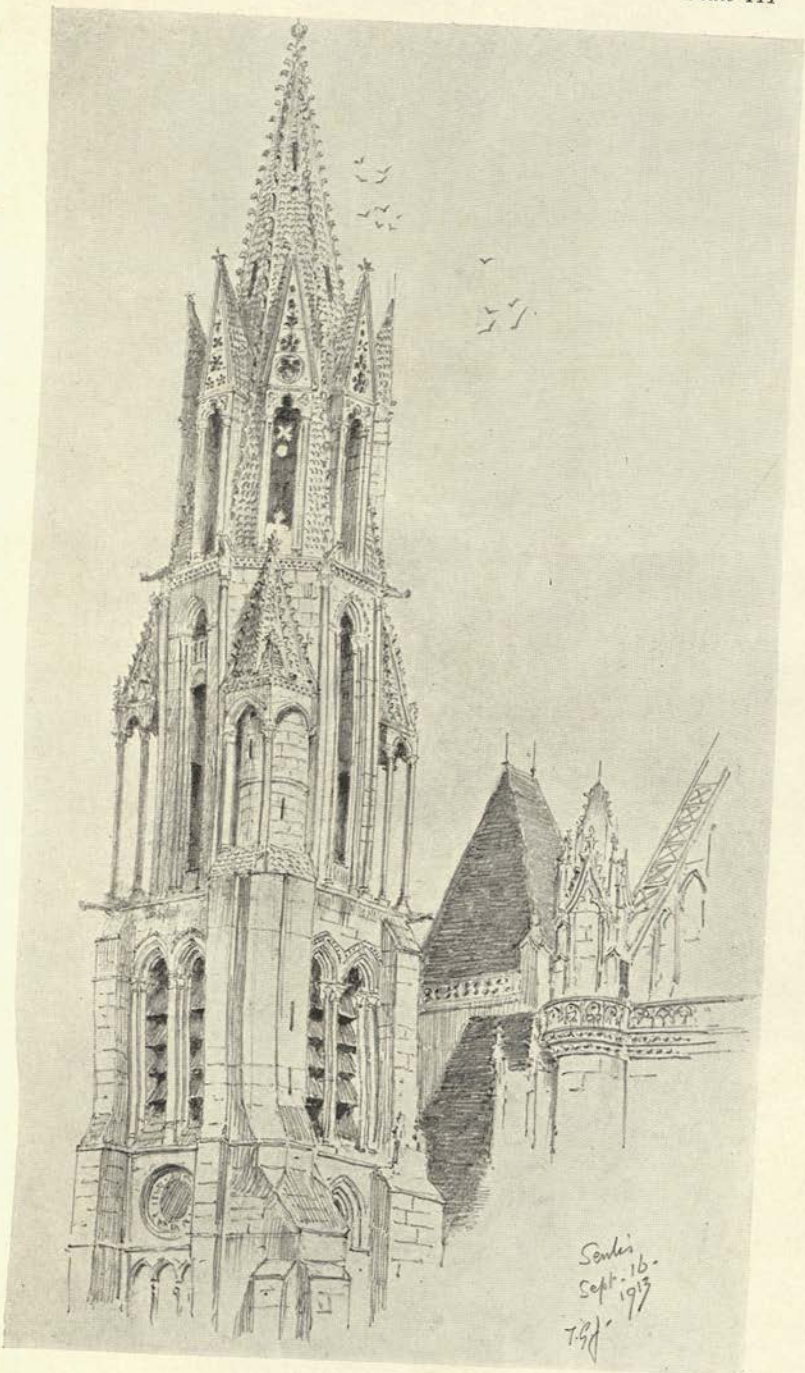
The church, once a cathedral, of Notre Dame at Senlis
SENLIS cannot differ much in date from that of S. Denis[1], and indeed some of its details seem more primitive. The choir has an early apse with ambulatory, from

[1] Viollet-le-Duc dates the choir between 1150 and 1165. He remarks that the sculpture of the capitals is a little backward in development. *Dict. Rais.* vol. VIII. p. 222.

Senlis

which shallow chapels project (Fig. 24). The triforium is vaulted, and has windows above the chapels. The apse is polygonal, but the outer wall of the ambulatory is round. The clerestory is flamboyant, but the capitals of the early vault remain at a lower level. The nave and choir were once continuous, but are now interrupted by a transept with a magnificent flamboyant end to the south. The vaults are sexpartite, the principal piers being clustered and very long in plan, alternating with intermediate piers, which are cylindrical. All the arches are pointed. The triforium has generally an open undivided arch, but in one bay at the spring of the apse it is divided into two lights (Plate II). The apse rests on six cylindrical columns, the vaulting shafts rising from their capitals, as they do in the intermediate columns elsewhere: in the main clustered piers they run down to the floor. In the aisles the regularity of the rib and panel cross-vault is somewhat disturbed by the elongated plan of the main piers, which causes a winding surface between the diagonal and longitudinal arches (*v.* Plate II). The west front has two towers, and a central portal with good statuary, and the side portals are simple and interesting. The two towers are alike up to the belfry stage, where the northern one stops and is finished with a pyramidal slated roof. The other was carried up in the 13th century, with a magnificent octagon lantern crowned with a spire, and with shafted tabernacles to fill out the angles of the square. This splendid steeple has been much praised, and has many beautiful parts, but it is not happily composed. The best aspect is that on the diagonal, as I have drawn it (Plate III). Seen in direct elevation it is painfully lean, and at a distance looks like a huge pinnacle, or a lighthouse, on a square base. The angle

The steeple



T. G. J.

SENLIS

Treasury Staircase
& Ambulatory round
Sens
after
Sept. 14. 1867.

T. G. J.

SENS

tabernacles are so slight and open and detached that they do not give the solid outline the eye desiderates; and the eight curious gabled spire-lights with their sloping backs and upright fronts, like those that have disappeared from S. Denis, seem to bulge outwards by a well-known optical illusion and have a bad effect. The detail of this part is lovely, but it does not condone these defects of outline: for in a steeple outline is everything. Senlis

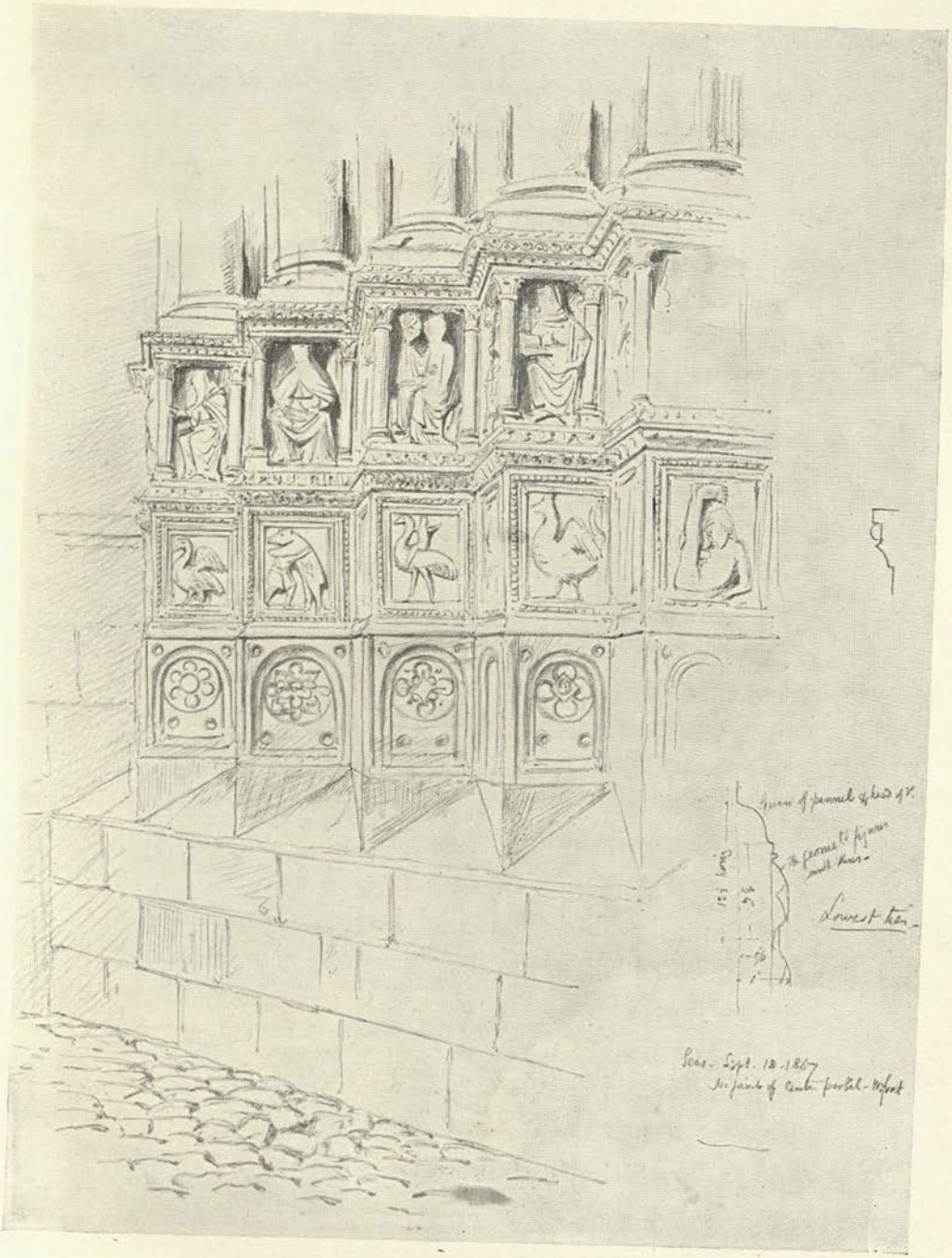
The cathedral of SENS has been already referred to in a preceding chapter. It was begun in 1143 and finished in 1168, with the exception of the west end which dates from the middle of the next century. The arches are pointed, the sexpartite vaulting regulates the alternate arrangements of clustered piers, and cylindrical columns,—doubled in this case,—and the vaulting shafts of the main transverse and diagonal groups of ribs are carried down to the ground. The whole logic of Gothic construction is accurately expressed. The traceried windows in the clerestory are not original but date from the later part of the 13th century after a fire, when the vaults also had to be reconstructed[1] (*v. sup.* Plate I, p. 38). Sens cathedral

The carving is abstract and in the great piers simple; but in the wall arcading are capitals with foliage of a Byzantine character, mixed in some cases with animals[2]. The pretty staircase to the treasury (Plate IV), is rather more advanced, but the difference in date, if any, cannot be very great. The west portals are rich with imagery, and afford a good example of the lofty enriched basement on which the columns of the jambs rest in many French churches (Plate V). In this case there are three tiers of panels above the plinth. The upper row contains The portals

[1] V.-le-Duc, *Dict. Rais.* vol. II. p. 349.

[2] Illustrated in my *Reason in Architecture*, Plate II.

Fig. 25.



T. G J.

SENS

figures of the liberal arts and sciences, and the lower has a *skiapod*[1], and other natural and fabulous creatures from the bestiaries. The ornament on one of the jambs, shows the conventional scroll-work of the preceding period in an advanced stage, with an early foreshadowing of the natural foliage that was soon to be achieved (Fig. 25). The treatment of the other side of the same pier is still more naturalesque. The windows at Sens abound in some of the most magnificent grisaille glass, with coloured borders, to be found in France, and the cathedral at Auxerre has more of the same kind. Sens

It is remarkable that the large vaulted triforium of Senlis, Noyon, and still later churches, has been abandoned at Sens in favour of one that anticipates those of Reims and Chartres. The architecture at Sens is rather in advance of its date. The triforium

The church of S. ALPIN, at CHÂLONS-SUR-MARNE shows on a smaller scale a logical Gothic construction, except that as the vault is quadripartite and not sexpartite there is no reason for the alternate variation of the piers (Plate VI). The main arches are pointed, but the round arch lingers in the windows of aisles and clerestory. The vault has no wall-rib, but that as I have explained elsewhere is not a necessary feature of rib and panel construction. S. Alpin. Châlons-sur-Marne

The fine church of NOTRE DAME in the same town has Romanesque towers with rather ugly leaded spires at Notre Dame. Châlons-sur-Marne

[1] We learn from Ctesias that these one-legged umbrella-footed people lived in India. "Hominum genus, qui Monosceli vocarentur singulis cruribus, mirae pernicitatis ad saltum: eosdemque Sciapodas vocari, quod in majori aestu humi jacentes resupini, umbra se pedum protegant." Plin. *Nat. Hist.* Lib. VII. Cap. II. Their nearest neighbours were the Troglodytes, but the people who had no necks, and wore their eyes between their shoulders were not far away.

the west end, and others at the transept which date apparently from 1145 when there seems to have been a rebuilding. The rest is later in the century. All the arches are pointed; and there is a vaulted triforium gallery, with a second triforium above united to the clerestory lights. The sweep of the apse starts from the towers at the transept. Although the vault is quadripartite there is a slight alternation of the piers. Many of the capitals are quite Byzantine in the character of their foliage,

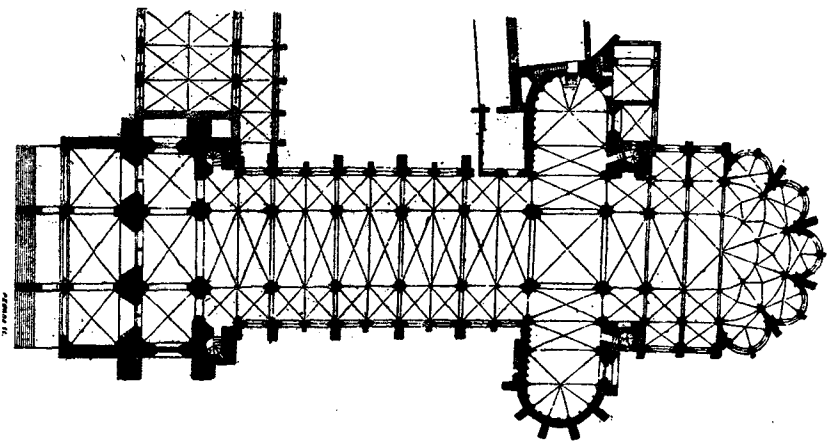
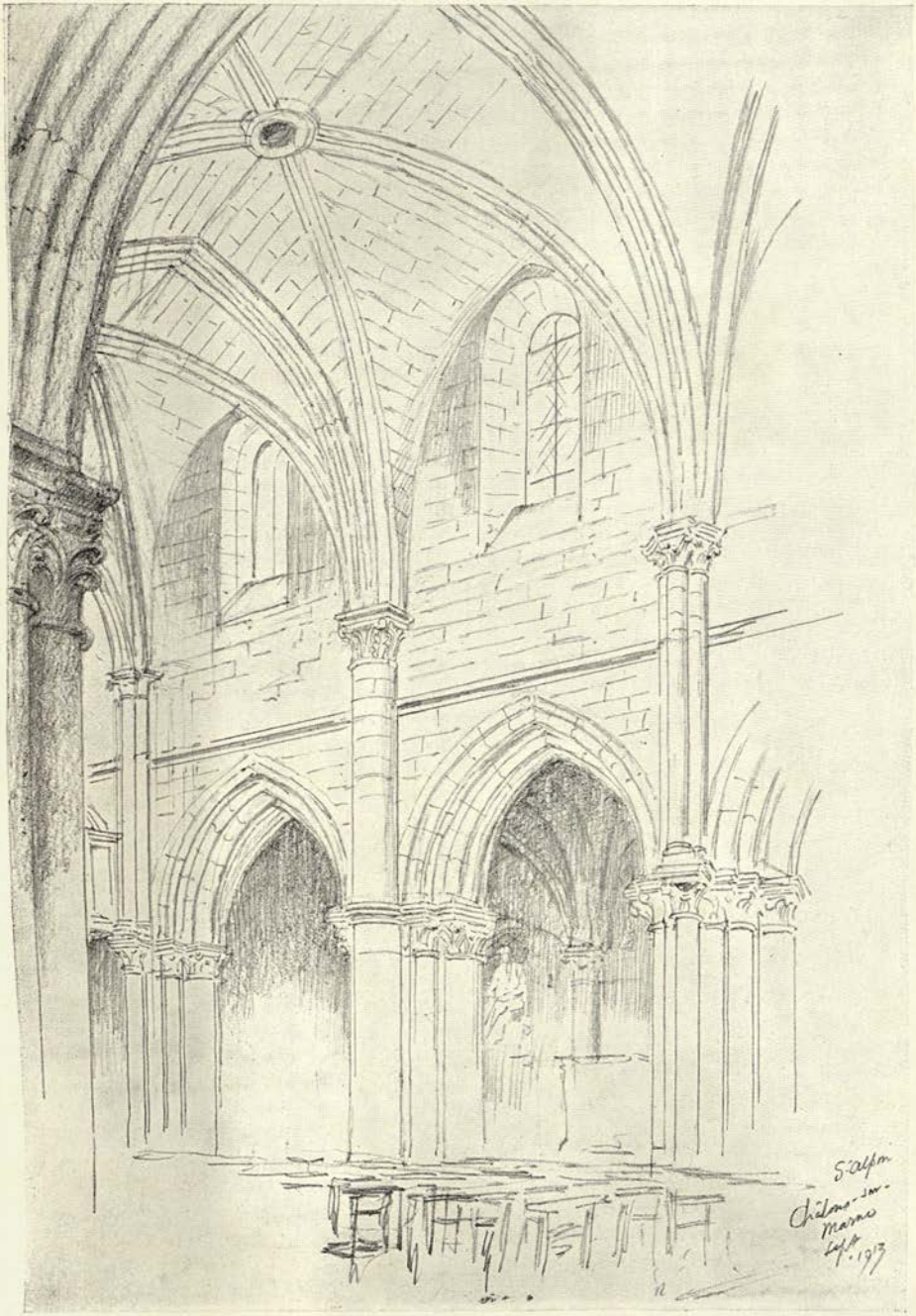


Fig. 26.

though it is fair to say they seem to have been well scraped even if they have not been renewed. Other capitals are Romanesque with wildly knotted foliage and scroll-work. The apse resembles that of S. Remi at Reims, with triple clerestory lights, and chapels opening to an ambulatory with triple arches.

Noyon cathedral

The cathedral of NOYON (Fig. 26) was begun in 1150 after a disastrous fire which burned the older church and the town in 1130. The new cathedral, which



T. G. J. S. ALPIN—CHÂLONS-SUR-MARNE

T. G. J.

NOYON CATHEDRAL

was finished with the exception of the west end about 1190 or 1200 is one of the finest in France, and illustrates perhaps better than any other the transition from Romanesque to Gothic. Bishop Baudoin who rebuilt it was a friend of S. Bernard, and of Abbé Suger, who had just finished his church at S. Denis in the new style; and Noyon has many points of resemblance to S. Denis, and possibly, as Viollet-le-Duc suggests, was built by workmen released from the other building. It is on a grand scale, and has a vaulted triforium. When this occurs the triforium gallery no longer corresponds to the space between the back of the aisle vaulting and the lean-to roof above it, for the roof has to be raised a storey higher; consequently in many such cases, as here at Noyon, we find a second triforium above the other, represented by a sunk arcade, which however is not always pierced with a passage.

Noyon

Resemblance to S. Denis

The second triforium

The choir and transept are Bishop Baudoin's work; not only there, however, but in the nave as well which was later, though finished before the end of the century, round and pointed arches are used indiscriminately. The transepts have rounded apsidal ends like those at Tournay, which had been united with Noyon in one see till 1135[1]. M. Vitet suggests that the canons of Noyon adopted this plan as a reminiscence of the sister church they had lost, and a protest against the recent separation.

The transept

The choir, which is the oldest part of the church, has three straight bays, and an apse of five bays, semi-circular, and surrounded by a semi-circular ambulatory from which radiate five semi-circular chapels between the great buttresses (Plate VII). In the columnar buttresses between the windows we see a survival of Romanesque

The choir

[1] v. *Gallia Christiana*, Eccl. Noviomensis.

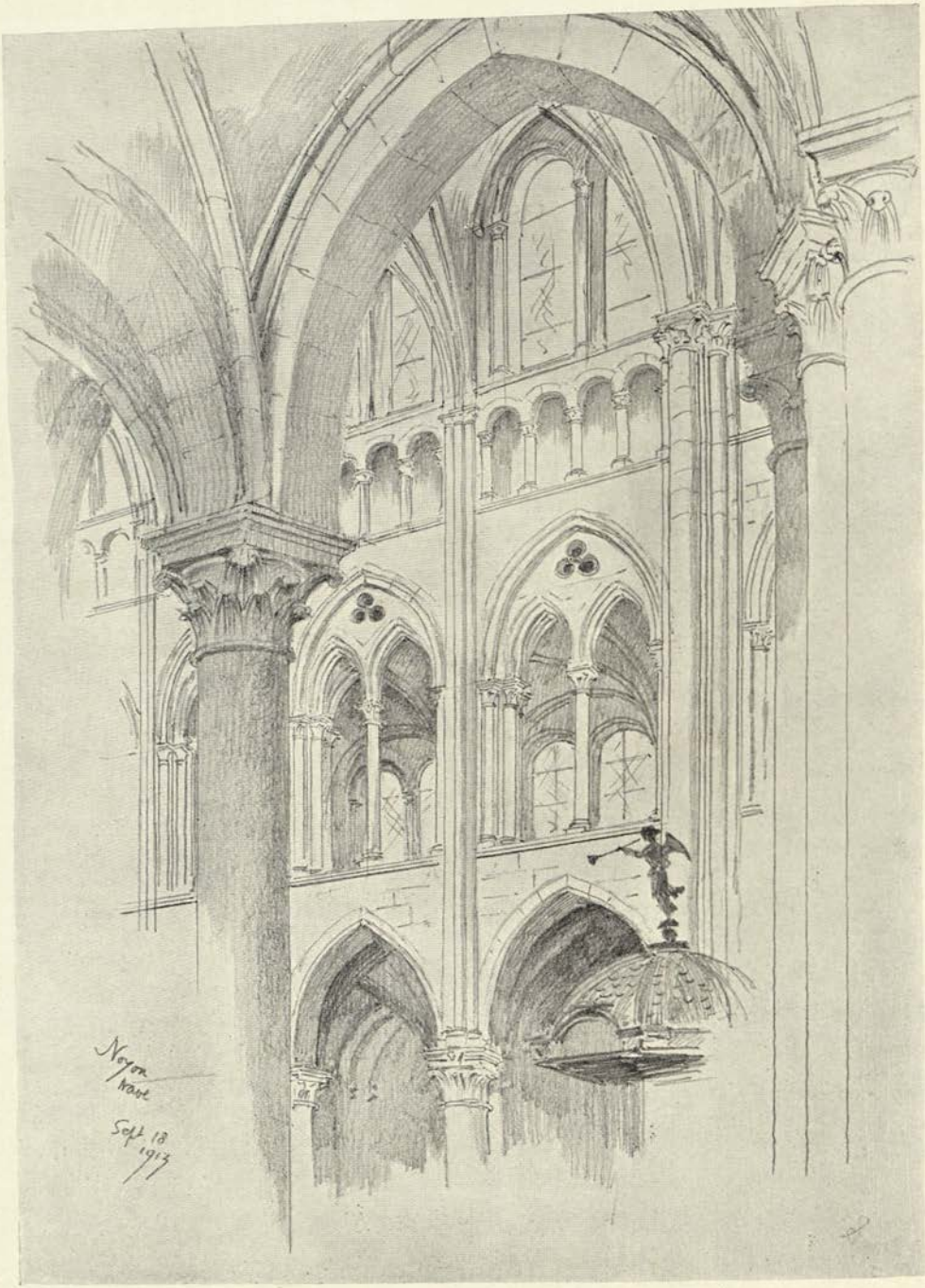
Noyon

tradition. Viollet-le-Duc observes that these chapels anticipate what was the ultimate plan of a cathedral *chevet*, for at Paris, Bourges, Laon, and Chartres, there were originally very few chapels or none at all, though these churches are later than that at Noyon; and he suggests that their presence here is due to the example of S. Denis[1].

Fig. 27.

The first bay of the choir is prepared with massive piers to receive a tower on each side, which was never built. In this bay both the arcade and the triforium have plain round arches, the latter undivided. They have two orders. The capitals of the further straight bays are very primitive and carry round arches. The apse columns are monocylindric and carry arches that

[1] *Dict. Rais.* vol. II. p. 303. Originally the cathedrals had either no chapels or very few, while the abbeys had many. They were added afterwards in great numbers by different families for their own use and credit.



T. G. J. NOYON CATHEDRAL—The Nave

are pointed and stilted. A blank arcade represents the upper triforium, but the arches here are trifoliated, while those in the nave are plain and round. The apsidal chapels have regular rib and panel vaults well devised and constructed: the diagonal ribs cross one another in one plane, and seem struck from an equal radius. All the windows in this eastern end are pointed (Plate VII), with good mouldings and jamb shafts. The fine sweep of this end is very striking, and the renaissance buttresses of the upper part do not hurt the design. Romanesque taste lingers in some of the capitals of the arches into the chapels, and of the wall arcading (Fig. 27). Noyon

The nave (Plate VIII) is rather more advanced than the choir. The arcade is pointed, as well as the triforium, which is divided into two lights, with piercings in the shield above; but the upper triforium arcade, and all the windows are still round arched. The piers are alternately clustered and cylindrical, as if prepared for sexpartite vaulting, though the vaults are actually quadripartite. There was, however, a fire in 1293, and the vaults may have had to be reconstructed then, and the plan changed. That the sexpartite form was originally intended is proved by the greater substance given to the transverse arches resting on the larger piers. The nave

The apsidal transepts have no aisles round them, thus escaping the heaviness of those at S. Maria in Capitolio at Cologne.

The west front (Plate IX) is of a later date, but with its great towers and projecting porch is quite among the finest in France, nor need we regret the steeples which would have taken the place of the picturesque roofs which now crown the towers. The 14th century portals have been ruthlessly defaced and stripped of The west front

Noyon

their statuary but retain some exquisitely carved natural foliage.

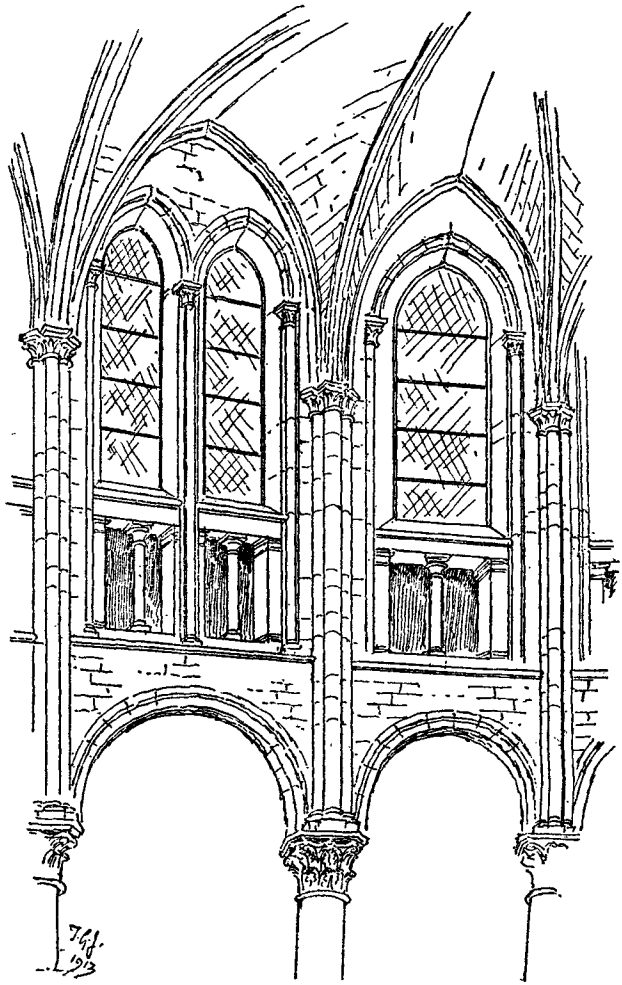
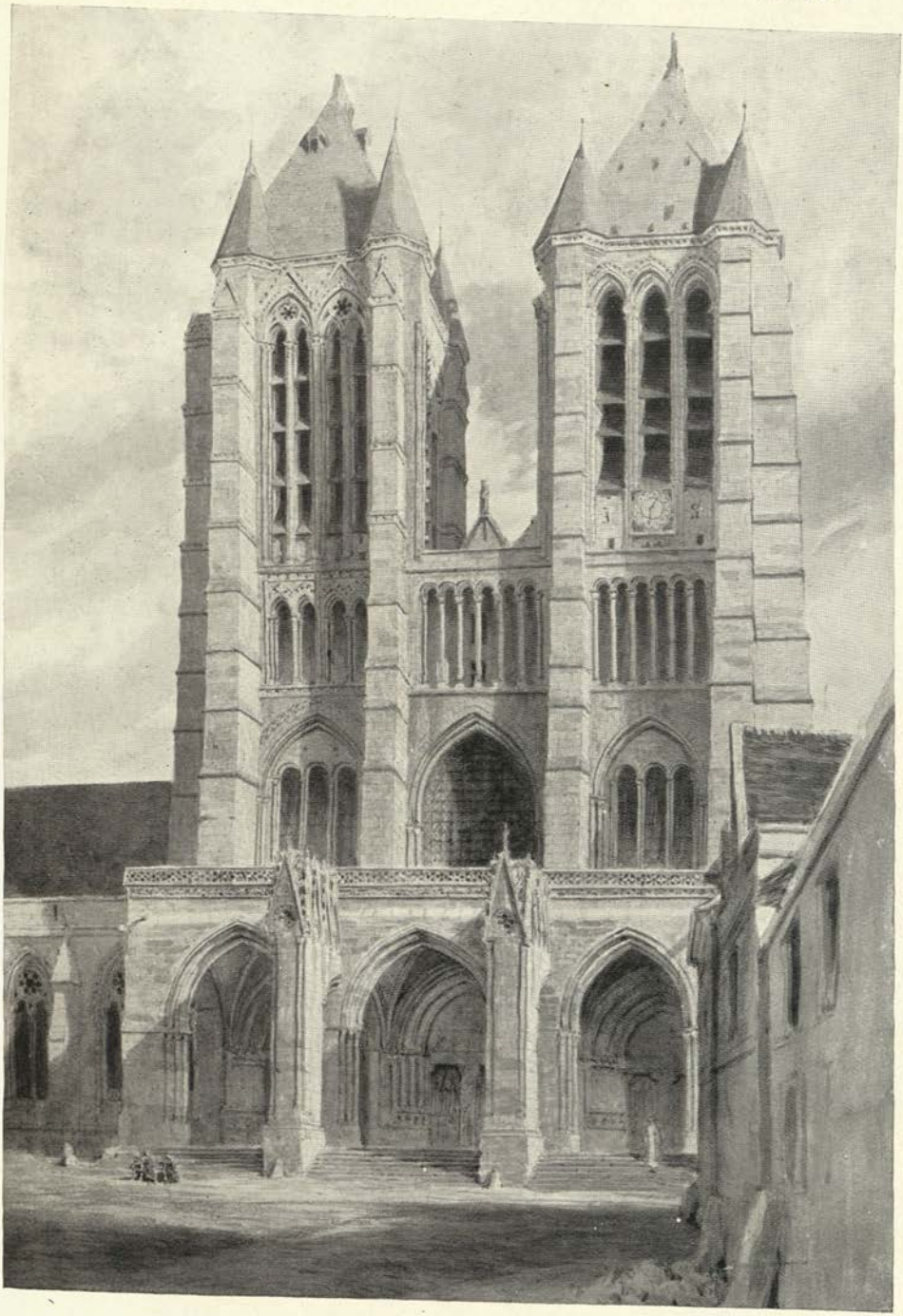


Fig. 28.

On the north side of the nave was a small cloister, said to have been built in 1270, of which only the west



T. G. J.

NOYON—West front

walk remains, and that is much broken. The carving is naturalesque here and in the fine chapter house opening out of it. The foliage round the inside of the entrance archway is extraordinarily natural, and reminds one of that at Southwell.

Noyon
The cloister and chapter house

In the choir of the church of S. GERMAIN DES PRÉS at Paris, which was consecrated in 1163, there is the same mixture of round and pointed arches as at Noyon. The arcade is round-arched but the high vaults are pointed. The aisles have round transverse arches, with very domical vaults. In the nave the piers are elongated, like fragments of a wall, and have attached half columns for the arches and one in front running up to the high vault. There is no triforium in the nave, but in the choir there is one with square headed lights which are united by shafts to the clerestory so as to form one composition with it (Fig. 28). Several of the capitals are quite classical, with the acanthus leaves, volutes, and hollow abacus of the Corinthian type.

S. Germain des Prés, Paris

With these examples we may conclude the transitional period of French Gothic, during which the art was gradually advancing step by step, from the early and tentative work at S. Denis to the bolder and more assured construction of the 13th century.

End of the transition

CHAPTER V

EARLY FRENCH GOTHIC (*continued*)

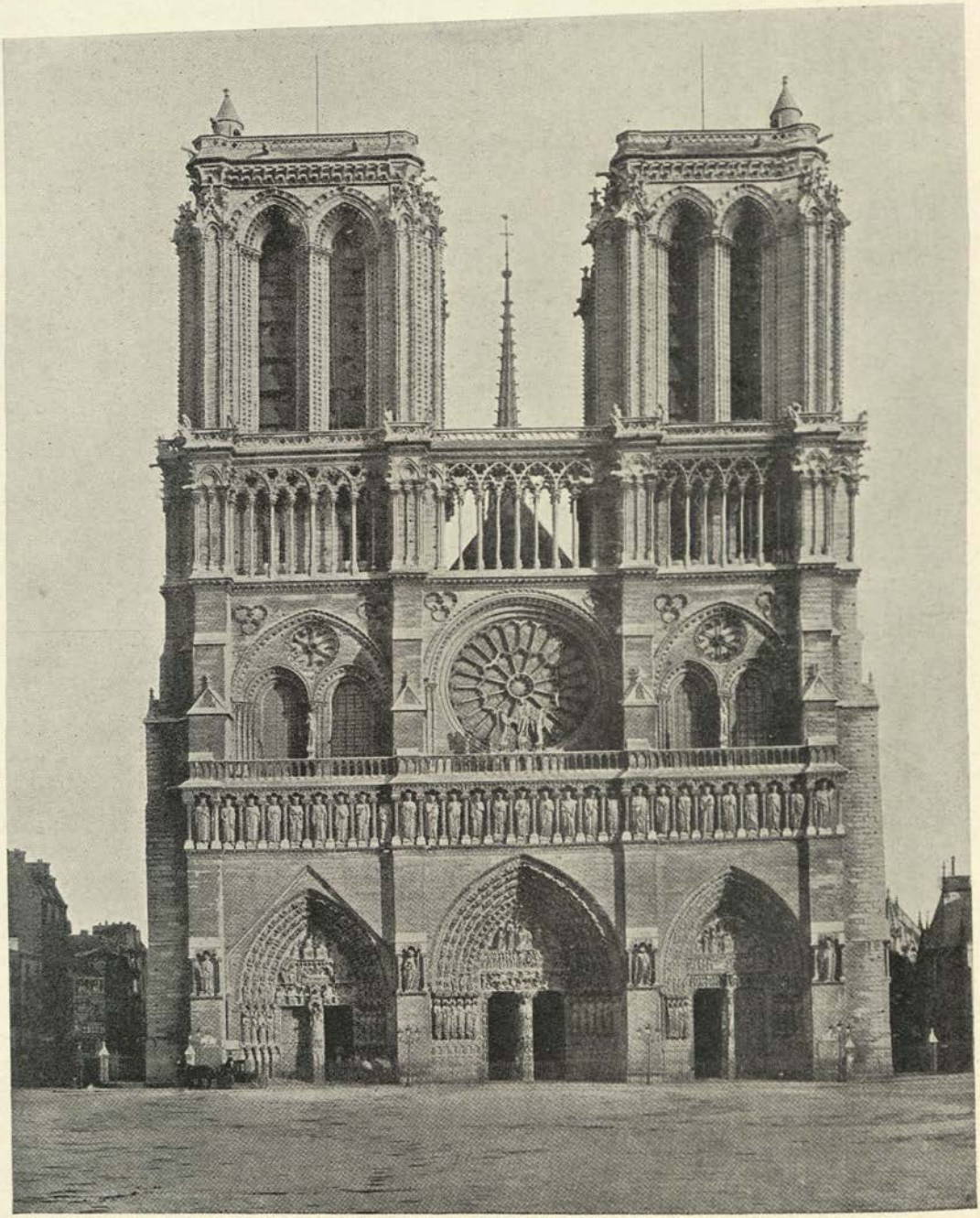
The cradle of Gothic

THE great French churches hitherto described show Gothic in its infancy. It is true the system of what we understand by Gothic construction was thoroughly developed in the art of Suger and Baudoin. The vaults were turned with rib and panel, the thrusts brought to isolated points and scientifically supported by counter thrusts and flying buttresses, and the use of the pointed arch was fully appreciated. But Romanesque traditions were not yet entirely forgotten. We still find round arches mixed with pointed, and primitive sculpture by the side of carving more directly based on nature. Nevertheless the movement from the old to the new style was unmistakeably there, and Viollet-le-Duc is tempted to ask whether in the church of S. Denis, and the cathedrals of Noyon and Senlis, we may not see the cradle of pointed architecture.

Paris. Notre Dame

In the cathedral of NOTRE DAME at PARIS (Fig. 29), which was begun by Bishop Maurice de Sully in 1163, and partly completed during his lifetime, we find the transition complete, and Romanesque tradition finally put aside. He demolished the old church of S. Etienne to make way for the eastern part of his new building, leaving the modest cathedral of Notre Dame for the present standing. The new choir rose rapidly. In 1177 a traveller, Robert du Mont, records that he saw it

NOTRE DAME—PARIS—The Nave



NOTRE DAME—PARIS

finished, all but the great roof, and in 1182 the high altar was consecrated by the papal legate. At the death of Maurice de Sully in 1196, the choir and transepts were finished; and the nave, excepting the towers and three western bays, had begun to rise from the ground, which had been cleared by pulling down the older cathedral[1]. Before the death of Philip Augustus in 1223, the nave was completed and the west front raised to the base of the topmost gallery, and the gallery and the upper

Paris. Notre Dame

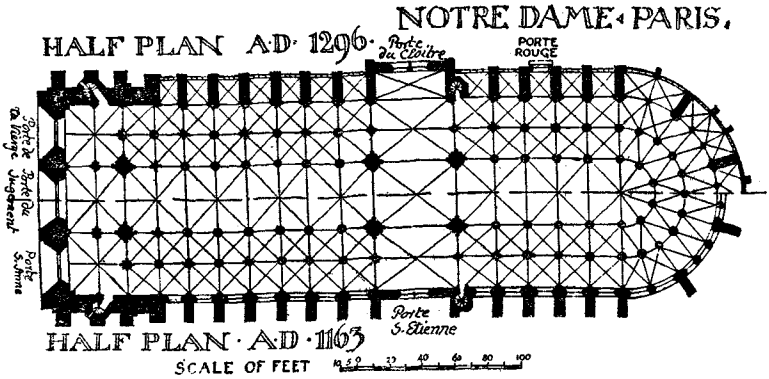


Fig. 29.

part of the towers were finished and the whole church completed between 1235 and 1240. There were therefore three stages in the construction; first the choir and transepts, 1163–1182, then the nave up to the last three bays, 1182–1196, and lastly the three western bays and the towers, 1218–1223.

The original plan (Fig. 29) was that of a simple basilica with a shallow transept and a double aisle on each side carried round the east end. There were no

[1] M. Marcel Aubert believes the nave was finished, all but the roof, thus far by 1196. *La Cathédrale Notre Dame de Paris*, p. 10.

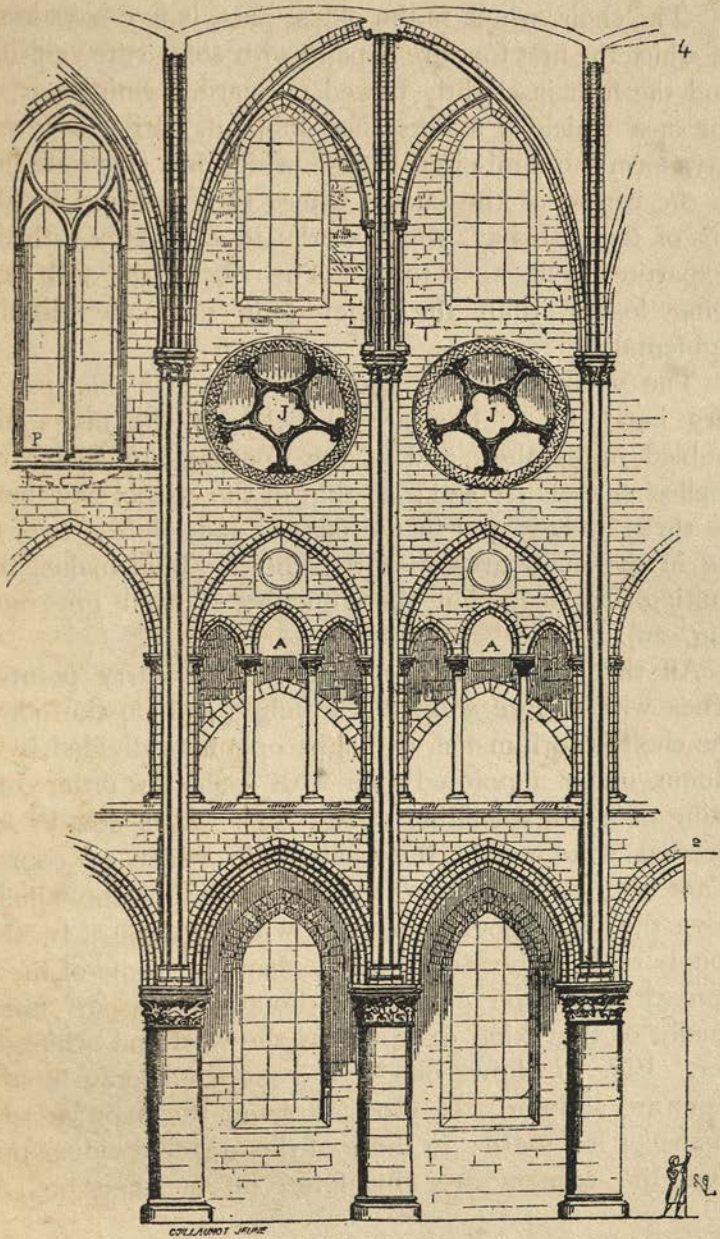
Paris. Notre Dame

chapels between the buttresses, but only the principal altar in the choir apse, with the bishop's throne behind it. There was, as now, a vaulted triforium gallery, but it had large windows behind, for which the pocket of the vault was tilted up, and this only left room above its roof for a small clerestory. The roof space over the triforium gallery was lighted from the nave by rose-shaped lights, taking the place of the second triforium at Noyon, Soissons, and elsewhere. The flying buttresses were in two flights resting halfway on a middle pier.

Early alteration

Scarcely had the canons finished their building before they began to alter it (Fig. 30). The interior would have been imperfectly lighted by the clerestory windows which were very small, and by those of the triforium A and of the aisles, which were remote. A fire gave the opportunity for alteration, and for following the example of other churches that had risen since Notre Dame was designed, with larger windows and ampler space for painted glass. The roses of the upper triforium J were abolished and the clerestory windows P lengthened downwards, widened, and filled with simple tracery: the windows at the back of the triforium were shortened, and the roof lowered. The double flight of the buttresses was altered into a single flight as we now see them, the middle pier being removed (Plate X). In 1258 a further alteration took place; the transepts were lengthened one bay by the architect Jean de Chelles. Lastly, in 1296, Bishop de Bucy filled in the spaces between the buttresses of the apse with chapels opening by triple arches to the outer ambulatory aisle; and this brought the plan to what we now see. Of these chapels the architect was Pierre de Chelles, presumably a son of Jean. They do not seem to have been finished till 1315.

Paris. Notre Dame



Second form ×. Original form –.

Fig. 30. (V.-le-Duc.)

Paris. Notre Dame

The choir, which is the oldest part, is five bays long: of which the first four are in pairs with sexpartite vaulting, and the fifth is slightly bowed outward, forming part of the apse which is a horseshoe in plan. Five narrower bays form the semi-circular apse, which has ribs radiating to the centre of the chord, where they are met by the ribs of the fifth bay, which works in admirably with the sexpartite vault next to it. The rib of the fifth bay being longer than the other four is made slightly segmental.

The vaulting of the double aisle round the apse is very ingenious. The arches between the aisles are doubled in number, and at the openings to Pierre de Chelles' chapels trebled; so that in the chapel bay there are three arches, and in the central aisle arcade two, to one in the main arcade of the choir. This makes the vaulting irregular, but the difficulty is well got over (Fig. 29).

All the columns are cylindrical and carry pointed arches with square soffit and a single roll on the edge. The choir triforium has two-light openings divided by a column, under a pointed arch with a shallow order consisting of a roll moulding (Plate XI). It is now lit by traceried windows in the back wall, which of course is not the original plan. In the transept the shield above the two lights is pierced with a circle. In the capitals we lose the Romanesque element: some of them approach the type *à crochet*, though there are none actually of that kind except near the west end, which is later. Fig. 31 shows one of the more elaborate kind; others are simpler. In those carrying the main arcade the abacus is square; in those of the arcade dividing the aisles the corners are chamfered off as they are at

Canterbury. All the foliage seems based on water plants, such as cress, and hits a happy mean between convention and nature. The bases are of the Attic type as modified by the mediaeval men, and have a singularly delicate and refined section, reminding one of Greek profiles (Fig. 22 c, p. 63). Over the crossing is a quadripartite vault very highly domed. The nave would originally have had above the triforium gallery a second triforium

Paris. Notre Dame

The nave

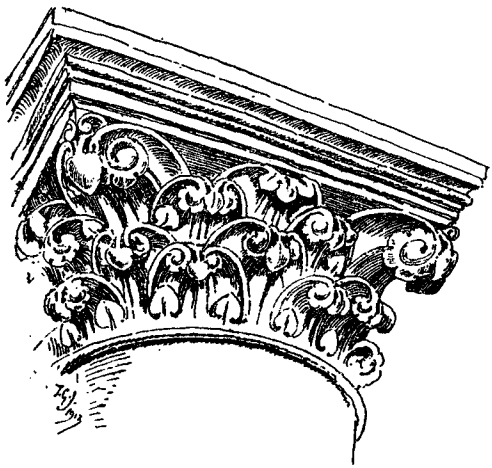


Fig. 31.

of the rose lights with their singular tracery, which must have had a very remarkable and unusual effect. These were all removed, and the clerestory lengthened and made into two lights with a mullion carrying a plain circle, as was done in the choir. In the bays of nave and transept next the crossing, Viollet-le-Duc has restored this original arrangement of the rose triforium and the small clerestory from traces and fragments which he

Paris. Notre Dame

found of the original design (Fig. 30): till then all the bays were alike[1].

The nave triforium

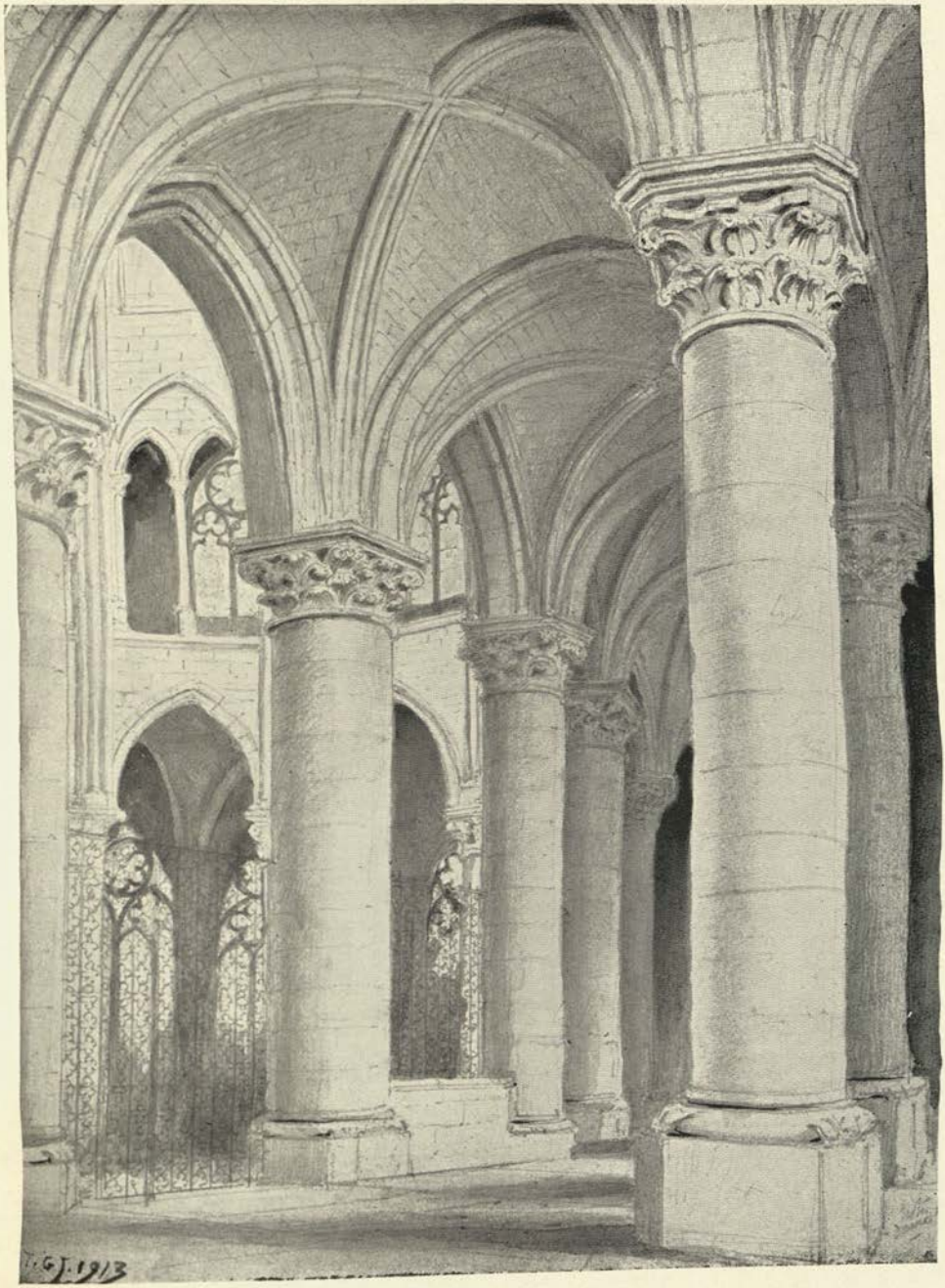
The triforium of the nave has three lights divided by columns under a pointed including arch, and the main arcade has two orders with roll mouldings instead of one as in the choir. The gallery is lighted by arched triangular windows, something like those at Westminster, containing a sexfoiled circle[2]. The nave vaulting is sexpartite in five double bays, but no difference is made in the vaulting shafts, nor in the great cylindrical columns of the arcade, which are all alike, though in the range dividing the two aisles cylindrical columns alternate with clustered piers.

The west front

The front (Plate XI) is perhaps on the whole the most satisfactory of all the great French façades. It is simpler than those of Reims and Amiens, more compact than that of Bourges, and its three great stages divided by two rich bands of arcading have a magnificent breadth of effect. The towers, no doubt, were to have had lofty spires of stone, but I think they are just as well without them. Their present square tops suit the general horizontality of the design, which is strongly emphasized, and in which we may trace the last expression of Romanesque tradition. There is also no doubt a Romanesque feeling in the great colonnades of the nave and aisles within the church, in the low proportion of the arcade, and the greater importance given to the triforium gallery, but this disproportion would have been

[1] These rose openings were found by him during the restoration, and between the publication of the first and second volumes of his *Dictionnaire Raisonné*. Compare the elevations in vol. I. p. 192, with those in vol. II. pp. 290, 291.

[2] These lights seem to be designed by MM. Lassus and Viollet-le-Duc, without any guidance from what they found. *v.* Marcel Aubert, *La Cathédrale Notre Dame de Paris*, p. 52.



T. G. J. NOTRE DAME—PARIS—South Aisle of Choir

less marked when the range of rose openings ran along between the gallery and the clerestory. Their removal has altered the whole scheme of proportion between the storeys. Be this as it may there is no nobler interior in France than that of Notre Dame, and the views in the aisles when the defective proportion is not seen, are as fine as we could wish (Plate XII)[1]. Paris. Notre Dame

If we look round France and compare the work at Paris with what was being done in the provinces while Notre Dame was rising, we shall be struck with the great advance made in the architecture of the Royal domain. At Autun and Vézelay we still find Romanesque construction, and semi-classical details. In Auvergne the local round arched and barrel-vaulted style was in full swing. At Périgueux the domes of S. Front were only just finished; and the Romanesque fronts of Arles and S. Gilles were in process of building. Much remained to be done to perfect the Gothic idea, but the conception was firmly grasped by the architect of Notre Dame, and it only remained for his successors to develop it further. Ile de France compared with the provinces

The cathedral of LAON (Fig. 32), which in many respects resembles that of Paris, dates from the last quarter of the 12th century. The older cathedral was burned by the citizens in 1112, as has been related in a former chapter, when their promised charter was refused and they rose and slew the bishop[2]. It seems to have been repaired in 1114 when the miraculous ox helped to Laon cathedral

[1] In the purlieus of Notre Dame may still be found relics of the canonical buildings. There is a 12th century vaulted chaped dedicated to S. Aignan now a squalid stable, which may be found with a little trouble. In this chapel disguised priests ministered during the Terror of the Revolution. There is also a fine staircase of heavy woodwork of Renaissance date in the Rue Massillon, which probably belonged to a canonical house.

[2] *v. sup.* p. 55.

Laon cathedral

draw the materials, but about 1160 an entirely new building was begun by Bishop Gautier de Mortagne[1]. Starting as was the general plan at the east end, the east side of the transept and the first three bays of the choir were first built, finishing eastward with a semi-circular apse and ambulatory. Next followed the nave, the west front with the two towers, and the lower part, as high as the roof, of the other five towers originally projected. All this seems to have been finished by 1205.

The apsidal choir

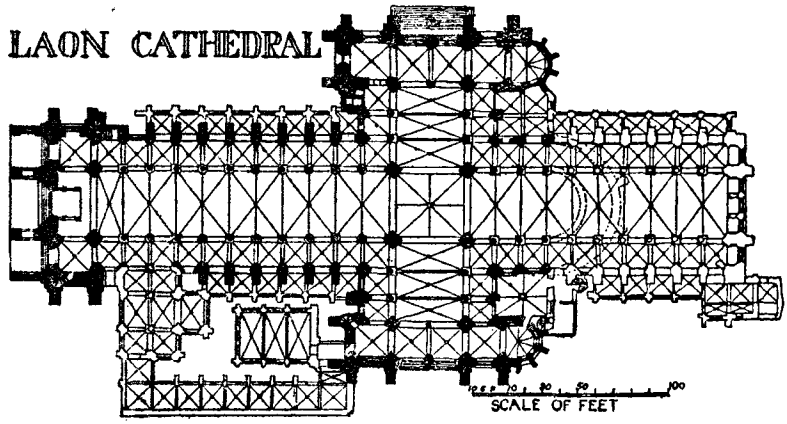


Fig. 32.

The upper stages of the Tour de S. Paul at the west side of the north transept were added before the year 1225, and those of the corresponding Tour de l'Horloge at the south transept rather later. The other two towers flanking the transepts on their eastern side never rose any higher. At the same time that the nave was built the choir was altered to its present form. The apse was destroyed, and the eastern arm of the building was prolonged till it was almost equal to the nave, and finished with a square east end, contrary to usual French

The square ended choir

[1] *Laon et ses Environs*, Lucien Broche.

Laon cathedral

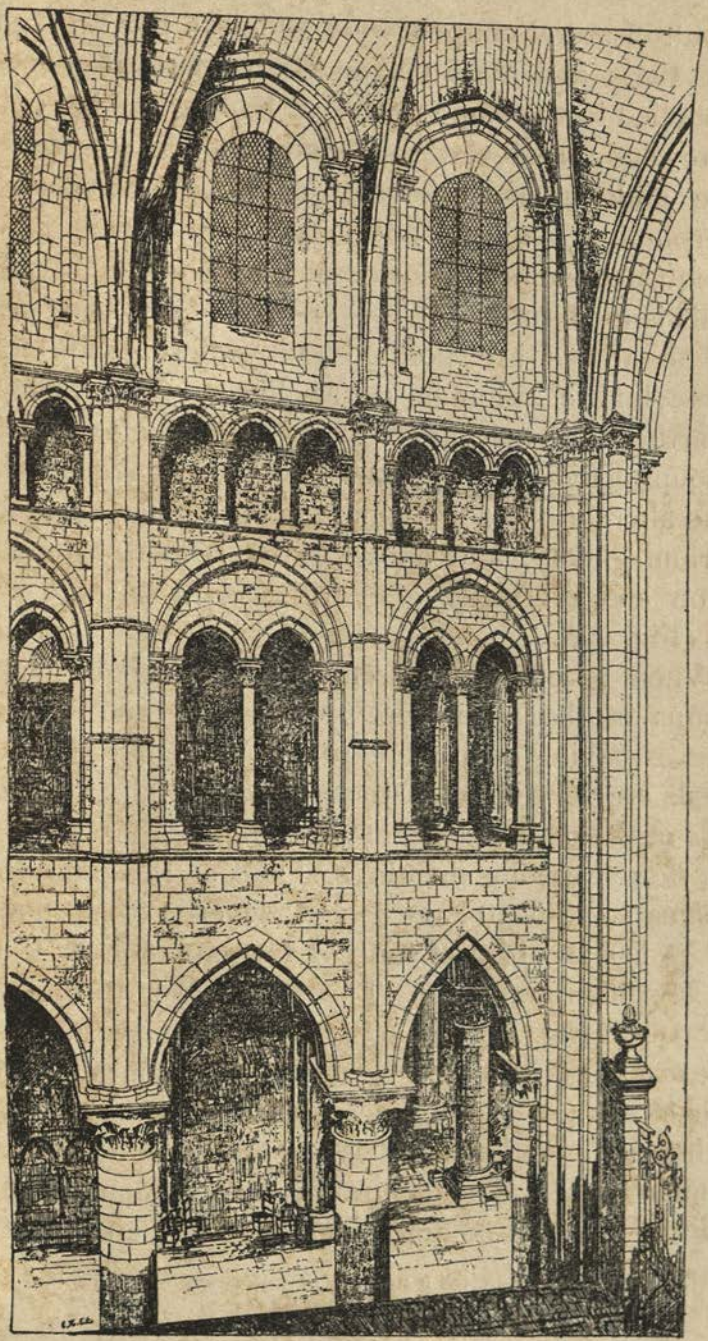


Fig. 33. (Drawing by J. O. Scott.)

Laon cathedral

custom[1]. Lateral chapels were added in the 14th century as at Paris and Amiens, and the south transept was remodelled in the same century. During the last century the towers threatened ruin, and extensive repairs had to be undertaken, involving much reconstruction and underpinning, and the antiquity of the building has in consequence suffered considerably. The statuary of the portals is modern.

The restoration

The vaults

The arches are pointed everywhere, and rest on mono-cylindric columns as at Paris. The vaults are sexpartite; the vaulting shafts rise from the nave capitals, in groups of five shafts and three alternately, corresponding to the alternation of the vaulting ribs. There is a vaulted triforium gallery, and above it the second triforium of Noyon and originally of Paris, with a passage in the wall (Fig. 33).

When rebuilding the choir on a straight line the columns of the apse were used again, and they bear traces of having been made to suit a circular plan. The capitals are very simple; those carrying the five vaulting shafts of the main cluster of ribs are polygonal to fit their load, those carrying the three shafts of the intermediate are square. The foliage is very severe; that shown in Fig. 34 has an abstract form of leaf common in Rutland and Northamptonshire. The bases are of the quasi-Attic type (Fig. 22 B, p. 63), but without the delicacy of those at Paris (Fig. 22 C). Indeed throughout the building there is a kind of roughness, virile but a little clumsy and heavy-handed, which has something in common with Norman work. The central lantern is unusual in the Ile de France, but common in Normandy, and general in

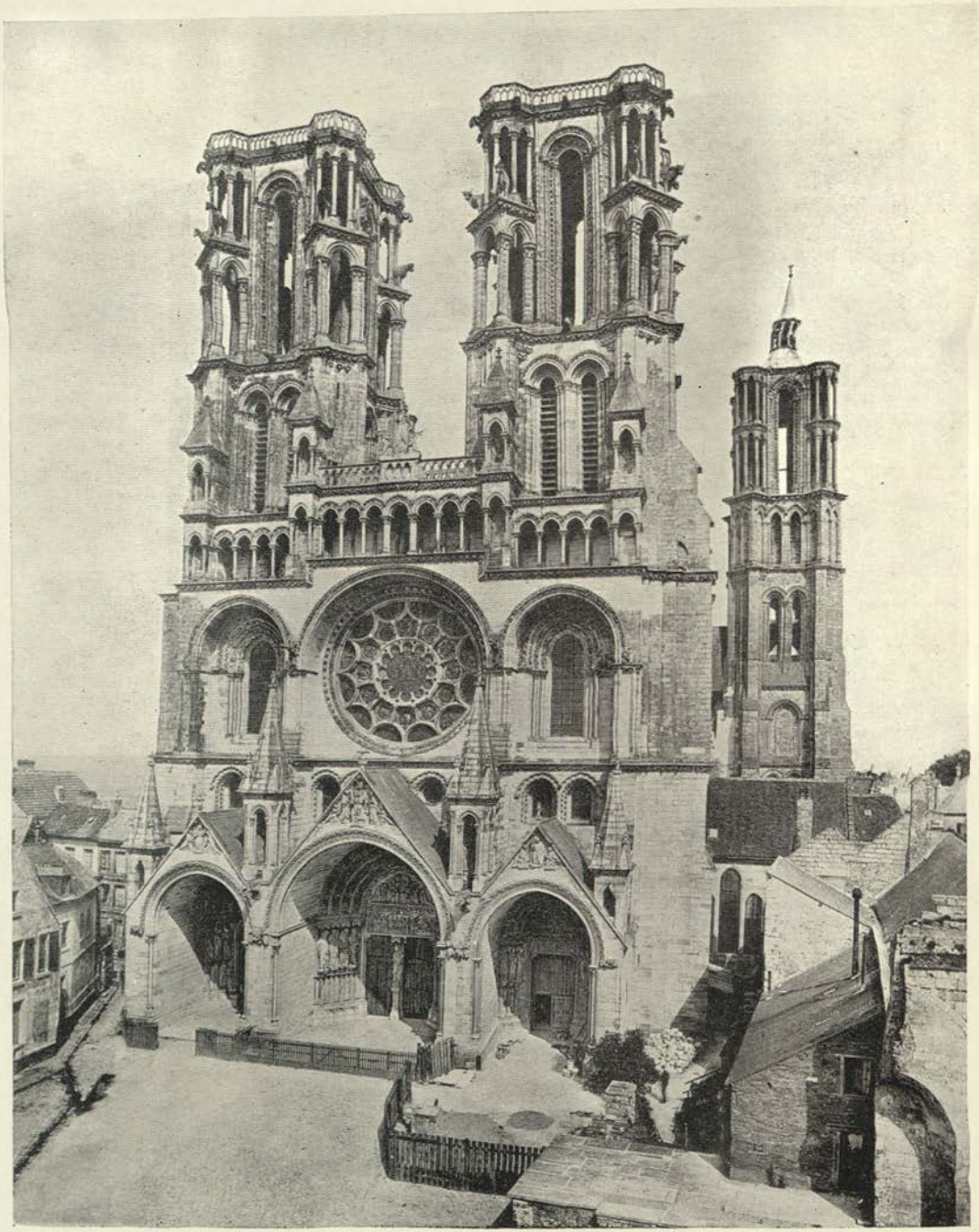
The capitals

Severity of design

Northern character

[1] M. Lefèvre-Pontalis cites a number of square ended choirs in the Ile de France. Broche, *op. cit.* p. 21.

T. G. J. LAON—Choir and North Transept



LAON—West front

Anglo-Norman cathedrals. At the ends of the transepts is the cross gallery at triforium level, formed by returning the arcade, which occurs at Caen, Cerisy-la-Forêt, and Winchester; and on the eastern side of the transepts are apsidal chapels in two storeys like those at Christchurch Priory (Plate XIII). All these are Norman features, and the sexpartite vault itself seems to have originated in Normandy, though it spread beyond its limits. Viollet-

Laon cathedral

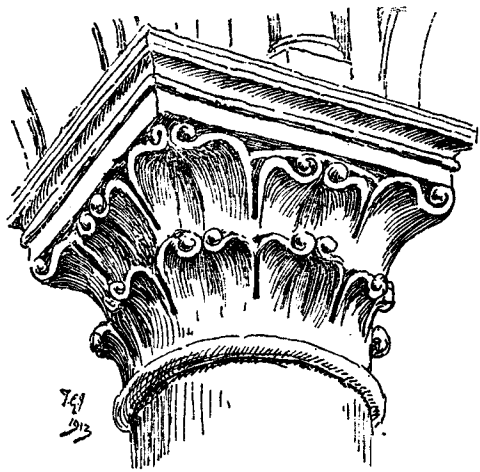


Fig. 34.

le-Duc traces in the architecture something of the rude and masterful character of this turbulent city. It is not known who was the architect; one may imagine him a northerner, of a different school from those who designed the cathedrals of Soissons and Reims.

The towers at Laon are highly original. Wilars de Honecort sketched them, and writes against his sketch that in all his travels he has never seen a tower to equal

The towers and west front

Laon cathedral

them[1]. Those of the west front (Plate XIV), are extraordinarily massive, with deep projecting buttresses up to the roof level. Their projection is disguised by the pedimented gables over the portals which are brought forward to the face of the buttresses[2]. The next stage has in the centre a rose window under a round arch between two pointed single lights, all similarly recessed between the buttresses. Then comes the usual arcaded gallery with which the nave gable is hidden as at Paris, Chartres and Reims. Above this the towers break into

The oxen

octagons, with projections at the angles carrying open tabernacles on colonnettes, square in plan in the first stage, octagonal in the second. In one of these a spiral stair on colonnettes is managed, and from between the colonnettes of them all peep out the oxen which com-

The spires

memorate the legend. A crocketted spire between four spirelets surmounted each of the four towers, and Wilars's sketch shows the lower part of those on the western tower. They have now all disappeared, but that on the Tour de l'Horloge lasted till the Revolution, when it had to be removed, being dangerously out of the upright.

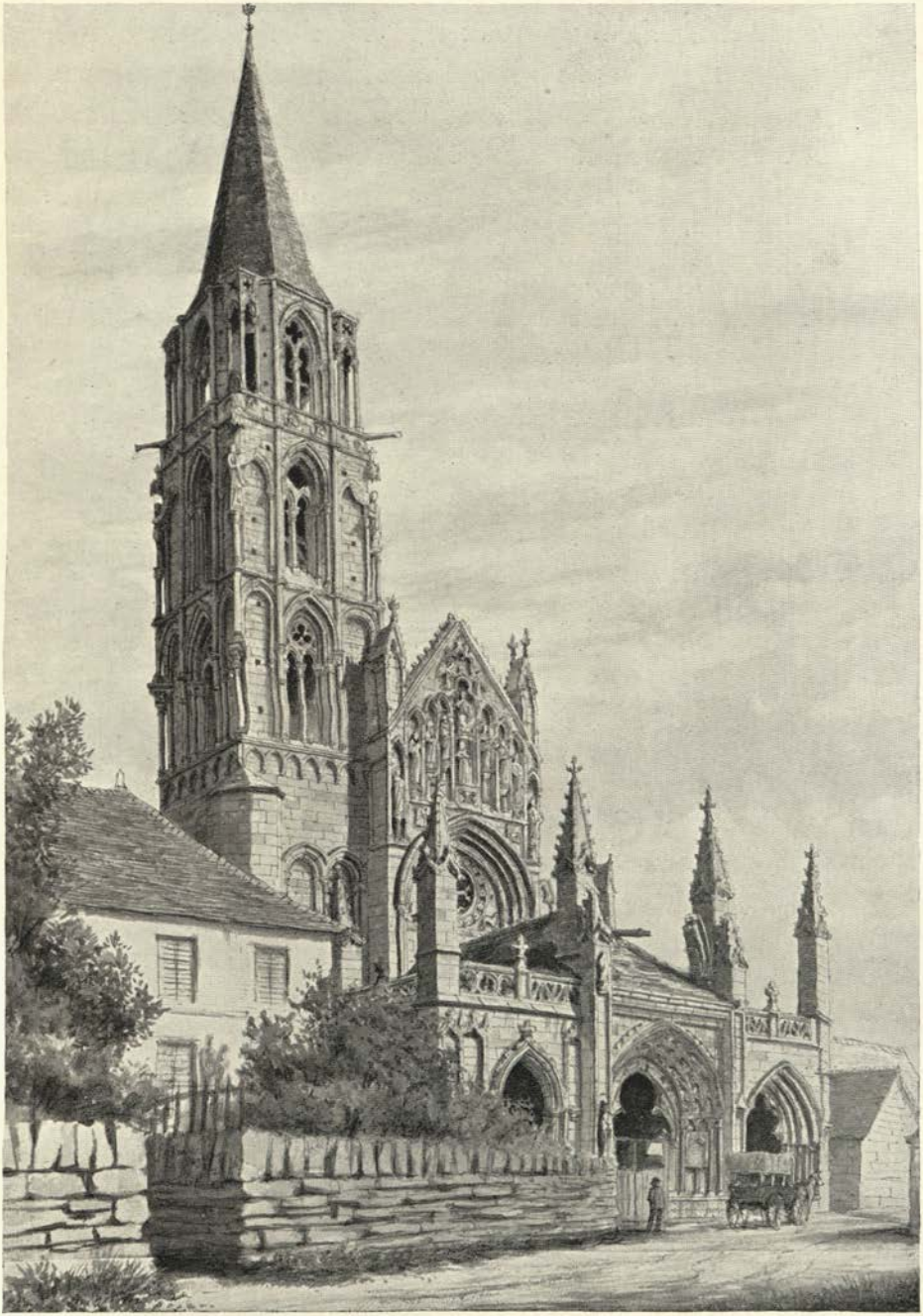
The construction of these openwork stages is obviously unsuitable for carrying weight. In the later, but some-

S. Père sous Vézelay

what similar tower at S. PÈRE SOUS VÉZELAY in Burgundy (Plate XV), there is only a wooden spire. This charming steeple, which dates from about 1240, is attached to a humble church, and the great gable with its niches and statuary has nothing behind it. The porch or narthex,

[1] J'ai este en mult de tieres si com vos porez trover en cest livre. En aucun liu onques tel tor ne vi com est cele de Loon. Ed. Willis, p. 57, Plates LXVII, LXVIII.

[2] These porches, however, were entirely reconstructed by the architect of the restoration, M. Bœswillwald. Broche, *op. cit.* p. 24.



T. G. J. S. PÈRE—SOUS VÉZELAY

on which the picturesque effect of the composition depends so much, is a later addition. Great lightness is given to the angles of the tower by the detached shafts, and the whole effect is airy and delightful. The union of the octagon with the square is artistically contrived by running the angle shafts of the octagon down into the square. But the tower abounds in awkwardness of detail, which however does not mar the effect seriously. S. Père sous Vézelay

To return to Laon. We must not overlook the ancient Évêché with its great hall overlooking the ramparts and the wide plain below, and its two-storeyed chapel in the earliest pointed style, built by Bishop Gautier, the founder of the present cathedral; nor the early church of S. Martin with its square east end like the cathedral. There are few towns in France more full of interest than Laon, and the picture of the ancient city crowning a mighty hill with the many-towered mass of its cathedral is not easily forgotten. Laon. The Évêché S. Martin

The fine church of S. Remy at Reims shows the transition from round to pointed architecture in a very interesting way; for in the nave we see Gothic construction visibly engrafted upon a Romanesque stock. It was at first a rather rude round-arched building of the 11th century, with a triforium gallery, but no second triforium above. The piers were plain round clusters of shafts carrying a square unbroken abacus. To these were applied in the late 12th or early 13th century stoutish vaulting shafts to carry Gothic vaults in place of the original wooden roof (Fig. 35). The two western bays were rebuilt with pointed arches and a sexpartite vault, the intermediate pier consisting of two columns, one behind the other. In their capitals the Corinthian hollow abacus survives (Fig. 36). S. Remy at Reims

S. Remy at Reims

The choir was entirely rebuilt at the same time with pointed arches, a triforium divided by slender colonnettes, and a second triforium above. All the columns are mono-cylindrical, and have well-carved capitals (Fig. 37).

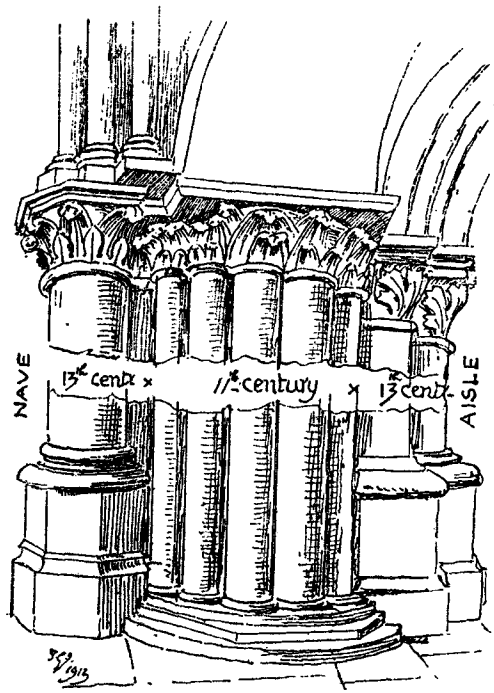
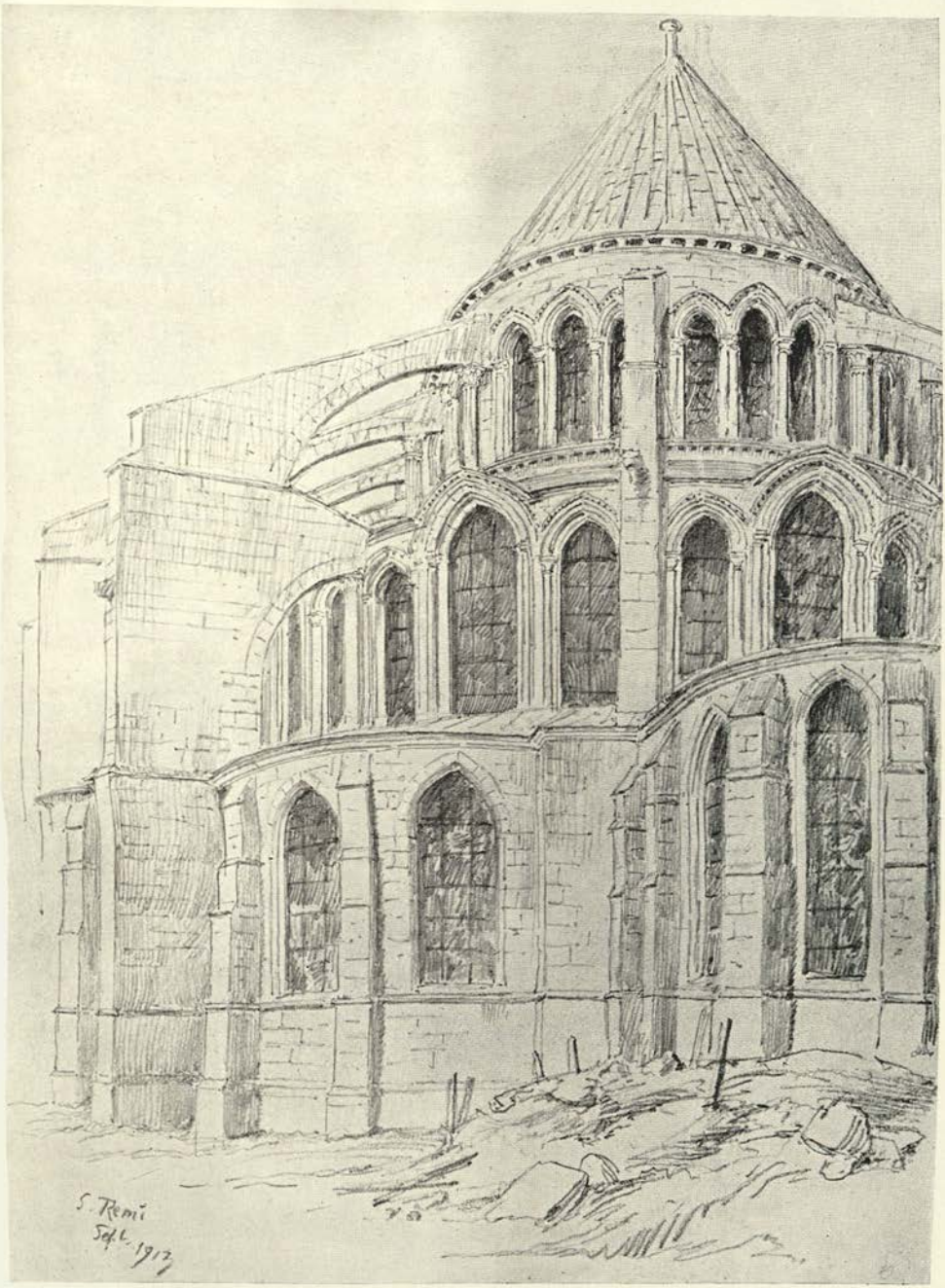


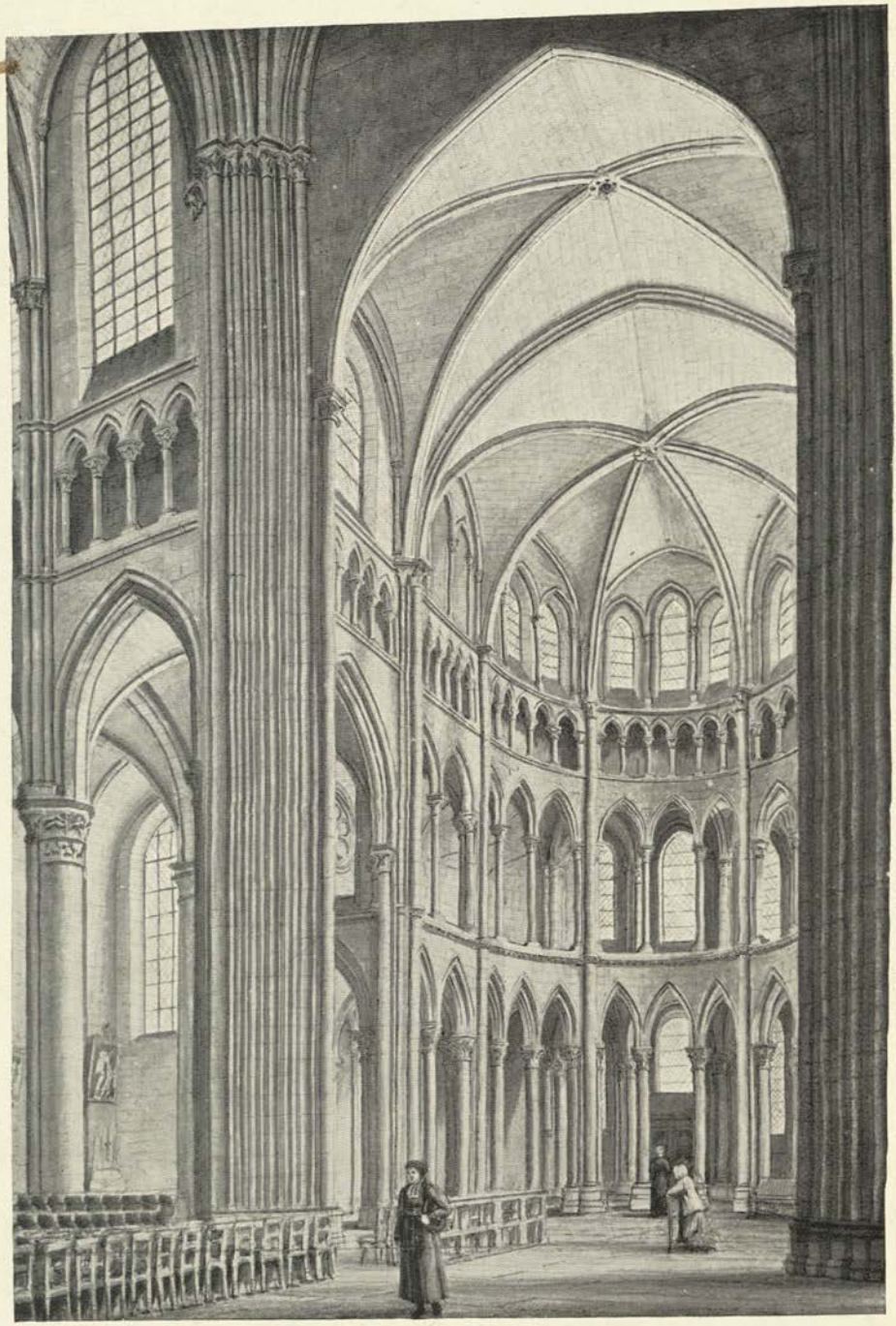
Fig. 35.

The clerestory has triple lights, the middle one higher than the others, and this is repeated in the triforium, where the lights are wider, and the middle one breaks up through the cornice on the outside (Plate XVI). The head of the flying buttresses is propped with a colonnette, behind which is a passage on the top of the triforium wall, the clerestory being set back to the inside.

The apsidal chapels open to the ambulatory with a triple arch.



T. G. J. S. REMI—REIMS



T. G. J. SOISSONS CATHEDRAL—South Transept

In the south transept of Soissons, which dates from Soissons

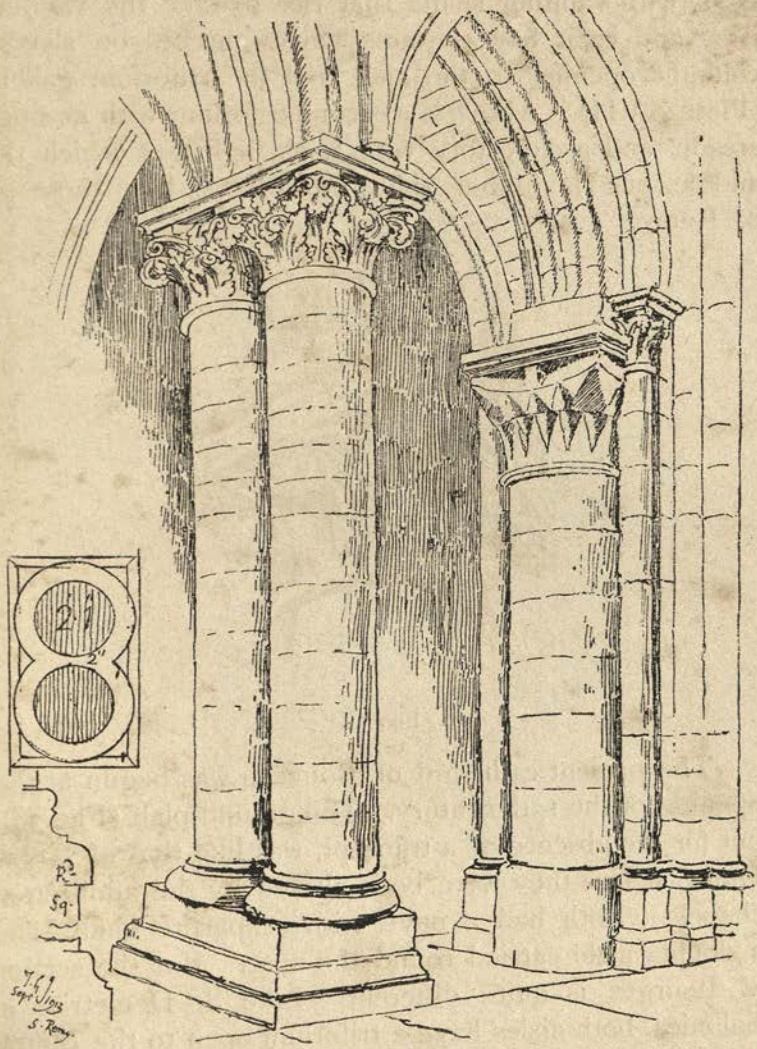


Fig. 36.

1175, we find the pointed style completely developed. Like those at Noyon, it is apsidal, but it is much more

Soissons

advanced in design. Strong clustered piers divide the bays, with vaulting shafts that rise to take the vaulting ribs, and each bay contains narrow arches on slender columns opening to the aisle and the triforium gallery (Plate XVII). Above is a second triforium with an open arcade, and a clerestory with triple lights of which the middle one is higher than the others, like those at S. Remy.

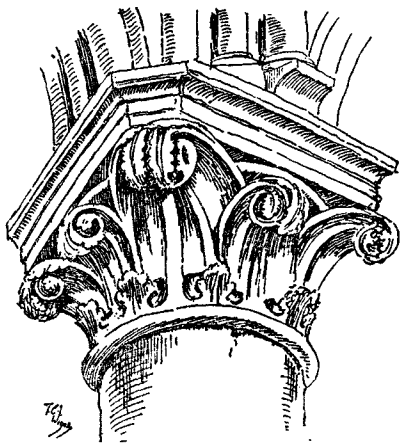


Fig. 37.

Bourges cathedral

The present cathedral of BOURGES was begun at the opening of the 13th century. The ground plan (Fig. 38), but for the absence of a transept, was like that of Notre Dame, before they were both altered by the addition of chapels. Both had a nave with sexpartite vaults and a double aisle carried round the apse. But the section at Bourges is quite different. Like S. Demetrius at Salonica, both aisles have a triforium open to the central nave; and not only that, but the inner aisle has also a clerestory of its own above its triforium, in order to contrive which the outer aisle is kept very low, and the

T. G. J. BOURGES CATHEDRAL—North Porch

inner one very high. The inner aisle therefore has the triple stage of arcade, triforium, and clerestory equally

Bourges cathedral

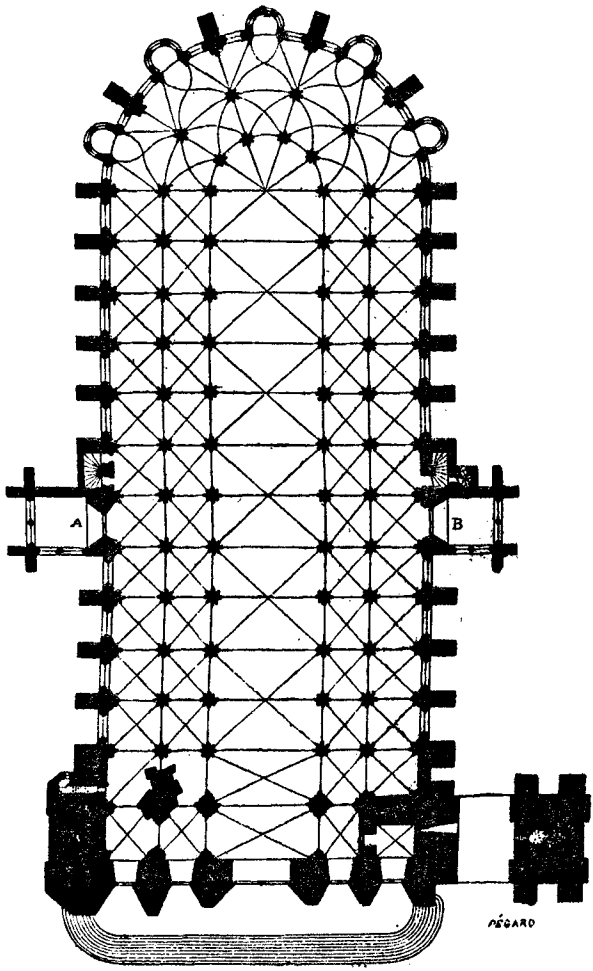


Fig. 38. (V.-le-Duc.)

with the nave. The effect of this surprising interior at first sight is extremely fine, but after a closer examination

Bourges cathedral

the impression makes itself felt that too much has been sacrificed to this single effect, and that the proportions of the nave have suffered by the importance given to the aisle. The nave columns look unduly pulled out, and the triforium and clerestory seem crushed up against the vault. There is also a poverty in the details, resulting probably from insufficiency of means, which ran short where the vault of the aisle was reached. The execution of the work in the crypt on the contrary, which was built while funds were plentiful, is excellent, and this part of the building is of remarkable beauty. The absence of a transept gives a certain classical dignity to the interior of this cathedral, with its long unbroken vaulted ceiling from end to end.

The side portals

There are two side portals where the transept would have been had there been one. The doorways are relics of the older cathedral, refixed in the new building, and are fine examples of Romanesque. There are few more beautiful scrolls than that over the north doorway, and few more beautiful porches than those built in the 13th century over the entrances on each side. That on the north is shown by Plate XVIII. Round one of the two arches is a series of little owls, and round the other one of little monkeys.

Le Mans

The splendid choir of LE MANS, which was built at the end of the Romanesque nave about 1220, is like that at Bourges, with a double aisle round the apse, of which the inner one has its own triforium and clerestory.

Chartres cathedral

The original cathedral church of CHARTRES (Fig. 39), was burnt in the 11th century and rebuilt by Bishop Fulbert in 1028, who at the same time remodelled the ancient crypt of the 9th century. Between 1134 and 1145 the north tower was built, detached and in advance

Chartres cathedral

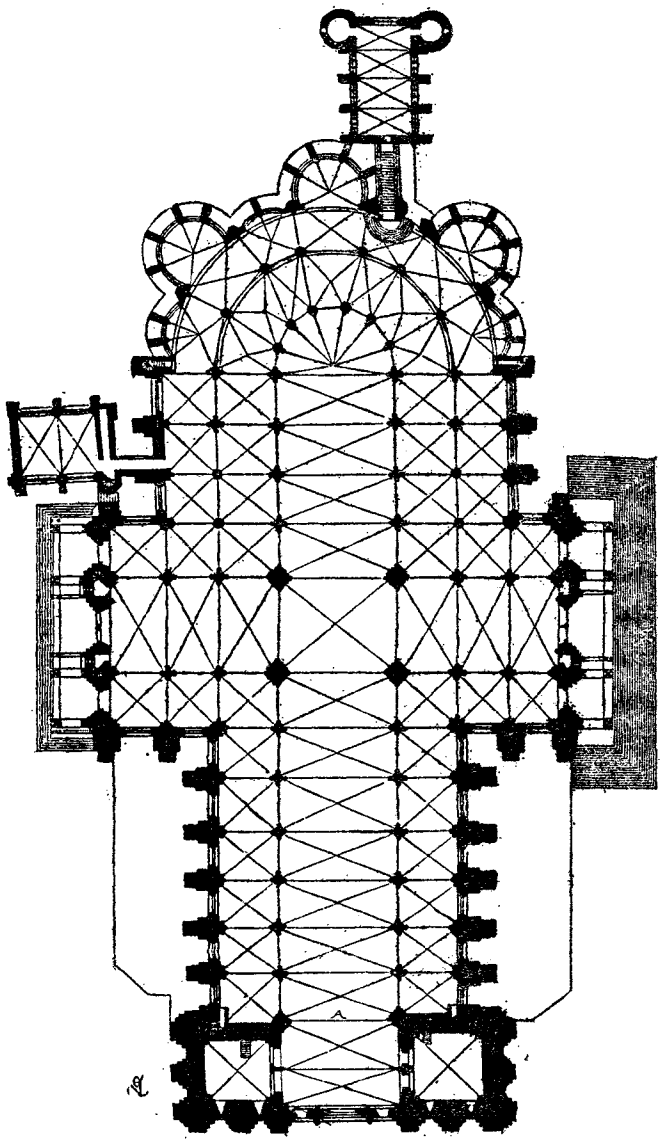


Fig. 39. (V.-le-Duc.)

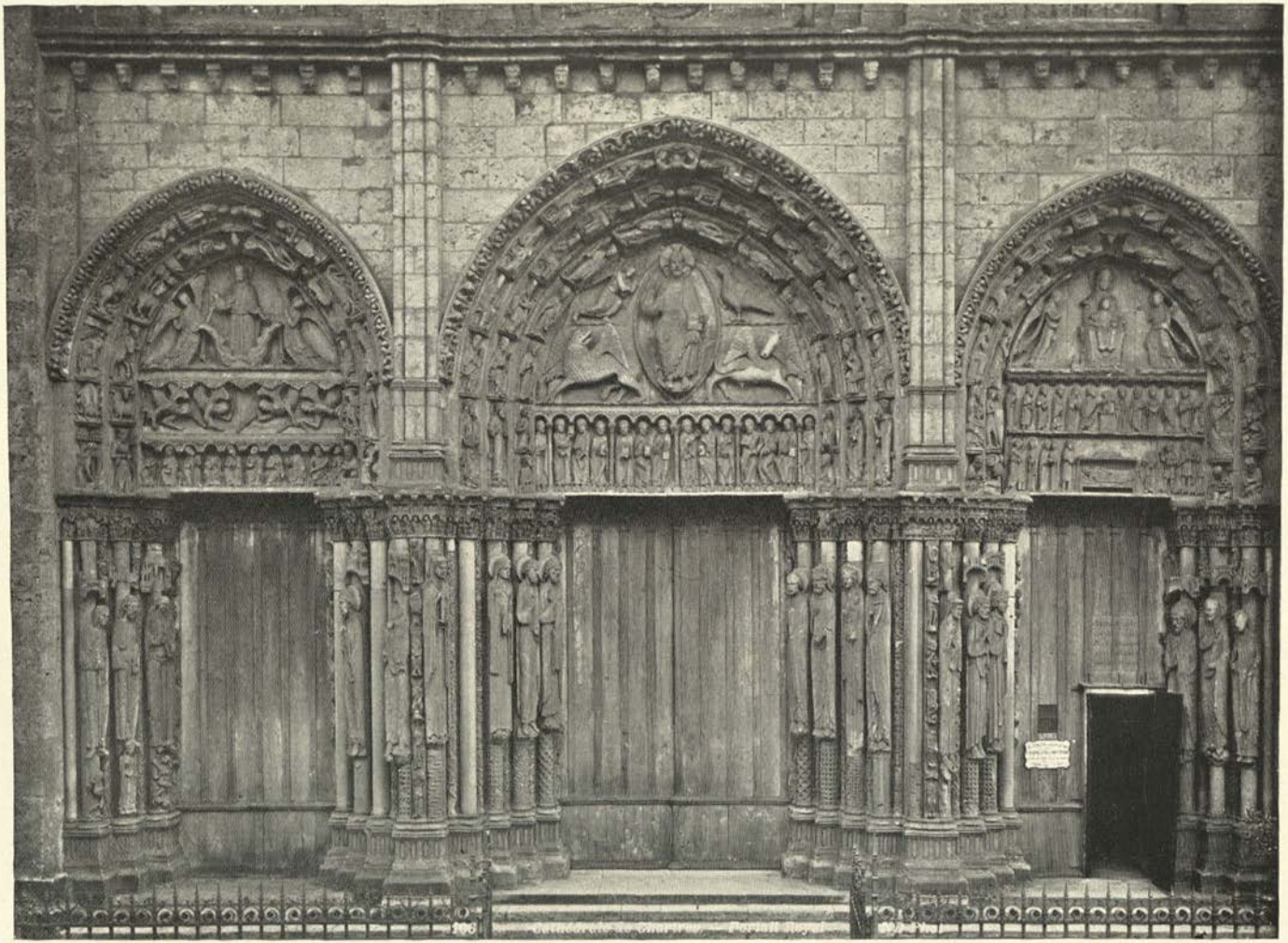
Chartres cathedral

of the west front. The south tower followed between 1145 and 1170, and the space between the towers and the church was at the same time covered by a narthex, of which the present royal portals formed the façade. This was placed at the back of the towers, which stood detached on three sides[1]. Before long however these doors were removed to their present place, flush with the front of the towers, and to this probably they owe their escape from the fire in 1194 which destroyed Fulbert's church with the exception of the crypt. The towers also were uninjured. The south tower always had its present magnificent spire, but the northern one had only a spire of wood, which after being twice burned down, was replaced between 1507 and 1513 by the beautiful stone steeple of Jehan le Texier, of Beauce.

The royal doors

The royal portals of Chartres (Plate XIX) form an important link in the series of French decorative sculpture. The three arches are pointed, and filled with carving. The jambs are flanked by solemn mystic figures, attenuated to the proportions of columns, and drilled into ranks of sacred imagery. The tympanum of the left doorway has the Ascension, that of the right the life of the Virgin Mary, and that of the centre a figure of Christ within an aureole, surrounded by the four apocalyptic beasts. Elsewhere in the arches are the signs of the zodiac, and the liberal arts and sciences; and the capitals are filled with scenes from the life of our Lord. The statues in the jambs have not the semi-classic grace of those in Provence: they are strictly subdued to their architectural function which is further expressed by the

[1] A plan of this original arrangement is given by M. Merlet, *Monographie de la Cathédrale de Chartres*. The credit of the discovery is due to M. Lefèvre-Pontalis.



CHARTRES CATHEDRAL—West Portals

T. G. J. CHARTRES CATHEDRAL—North Porch

long and straight Byzantine folds of the drapery; but the heads are full of character and individuality, and that of Christ is superb, and may rank with his portraiture at Reims and Amiens. Chartres cathedral

The rebuilding after the fire of 1194 was carried through with amazing energy, and was practically completed by 1212. Who the architect was is unknown, for though there was a labyrinth in the nave floor as at Reims and Amiens, the central figures which would have revealed his identity are missing. Bound by the towers on the west, and by Fulbert's crypt on the east, the sanctity of which forbad any interference, the architect had to be satisfied with a short nave, and his east end had to stand on Fulbert's walls, and this in many ways affected his plan. The whole conception was magnificent: besides the two western towers there were to be two at each transept, two more again at the chord of the apse, and a central tower over the crossing. The central tower, however, was never built, and the other six only reached the eaves of the church, so that of the nine that were intended only the two original western steeples exist. The rebuilding 1194–1212. The nine towers

The architecture of Chartres is a step in advance of that at Paris and Bourges. The vaults are quadripartite throughout: the vaulted triforium gallery has disappeared, and is replaced by a simple arcade on colonnettes, with four arches in the nave, five in choir and transepts, and two in the apse. The triforium has a passage, and a back wall: in France it is rare to find it in the English fashion open to the roof space behind. The pointed arch has finally triumphed and the round arch disappeared. The windows of the aisles, and of the apse clerestory, are plain wide single-lights, but the other clerestories have two-light windows with a circle of plate tracery in the Advance in style at Chartres

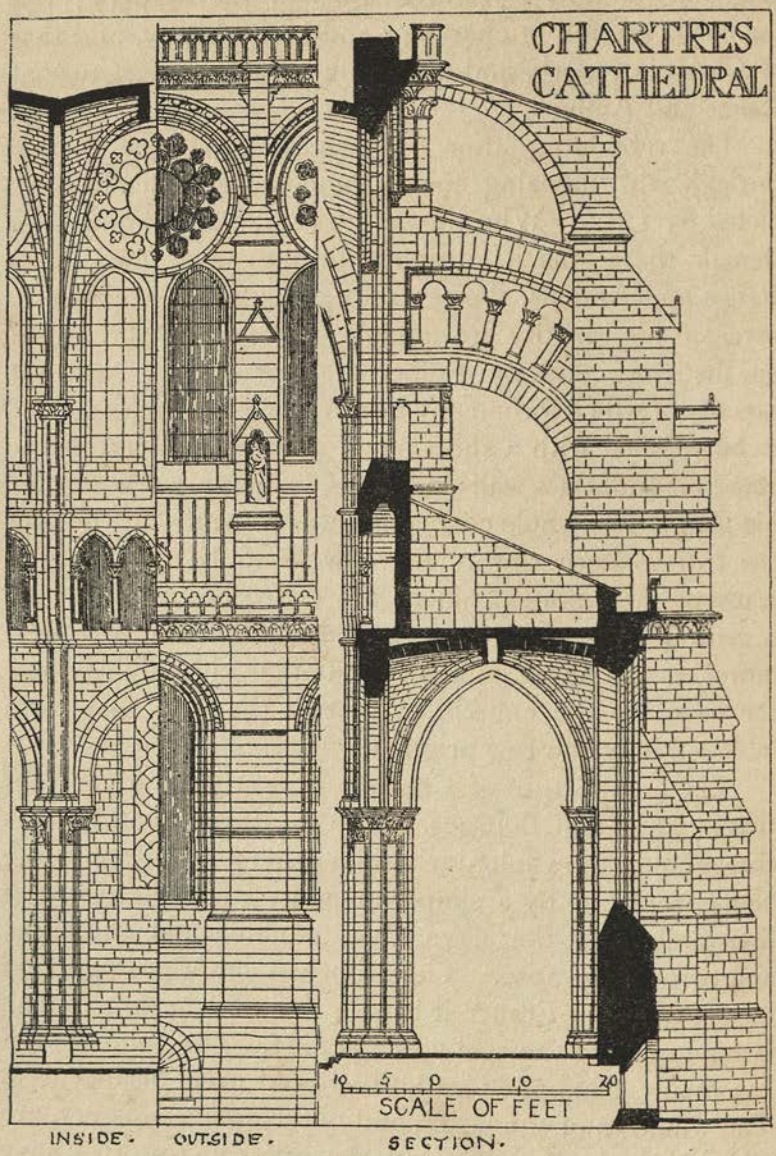

CHARTRES
CATHEDRAL
10 5 0 10 20
SCALE OF FEET
INSIDE. OUTSIDE.
SECTION.

Fig. 40.

head (Fig. 40). Every window is filled with painted glass of the richest and deepest hues of ruby, emerald and sapphire, and this makes the church very dark. The glass in the western triplet is of the 12th century and was moved with the old façade; the rest dates from the rebuilding in the 13th.

Chartres cathedral. The painted glass

The columns are alternately octagonal with four round colonnettes attached, and round with four octagonal colonnettes. The colonnette facing the nave has no capital, but the abacus of the rest of the group runs

The columns

Fig. 41.

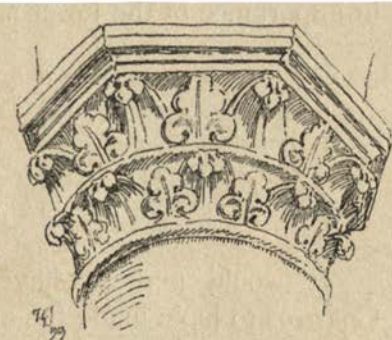


Fig. 42.

round it, and from that rises a group of vaulting shafts that run up to take the ribs.

The capitals are very simple (Fig. 41), and do not show much artistic skill, but they introduce us to the *cap-à-crochet*, a type which runs through all succeeding styles in France till it becomes somewhat wearisome. The columns dividing the choir aisles are cylindrical and have caps of the same kind (Fig. 42).

The *cap-à-crochet*

The proportions of the interior have always struck me as singularly happy. It has neither the depression of Paris and Rouen, nor the extravagant altitude in relation to its span of Amiens. In the bay we find a

Proportion of the church

Chartres cathedral

new scale of relation between the three storeys. The suppression of the vaulted triforium gallery and the consequent reduction of height in that storey allowed the enlargement of the other two. The clerestory is unusually lofty, and has a fine effect in the apse, and the arcade is much higher than that at Paris, which is too low, and much lower than that in the nave at Bourges which is too high. If we divide the height from floor to apex of vault into 32 parts, we get the following comparative table, which shows roughly the gradual increase in importance of the lower storey during this period.

	Paris.	*Chartres.*	*Reims.*	*Amiens.*	*Bourges nave.*
Arcade	11	14	$15\frac{1}{3}$	16	18
Triforium	9	4	$4\frac{2}{3}$	$4\frac{3}{4}$	5
Clerestory	12	14	12	$11\frac{1}{4}$	9
	32	32	32	32	32

It would perhaps have been an improvement at Chartres to have made the arcade a trifle higher and the clerestory a little shorter.

The N. and S. Porches

But the great glory here is the triple porch at the end of each transept, which, especially that on the north (Plate XX), may claim to be the finest works of 13th century Gothic in France, both in general design and in wealth of sculpture. The south porch is said to have been begun in 1224, and the north in 1250. Classic tradition probably dictated the horizontal lintels from which the barrel vaults of the triple arches are turned, and which unhappily have broken under their load, and after being in vain strapped up with iron are now being restored (Fig. 43). Statues flank the doorways, circle round the arches, and are moulded into the piers; and their supports are enriched with grotesques, miniature

The statues

Chartres cathedral

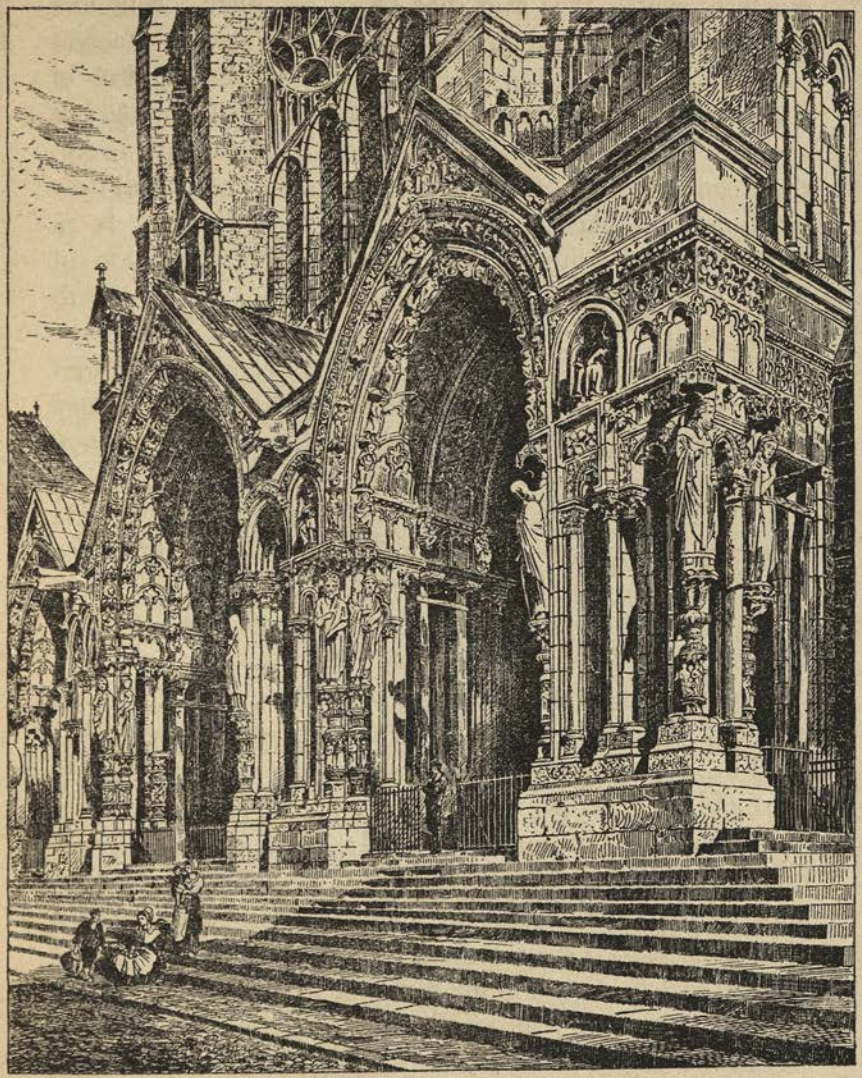


Fig. 43. (Drawing by M. Adams.)

Chartres cathedral

figures, flutings, diapers, and delicate natural foliage in a masterly way. It is said that there are over 700 figures in the north porch and portals alone. The statues attached to the columns preserve something of the rigidity of those in the royal portals, as befits their function, but they are modelled with much greater freedom and variety, the heads are full of character, and some of the figures reach a high classical standard[1] (Plate XXI). It is interesting to compare the group of the Salutation of Mary and Elizabeth in the left-hand door of the north porch with the similar subject at Reims.

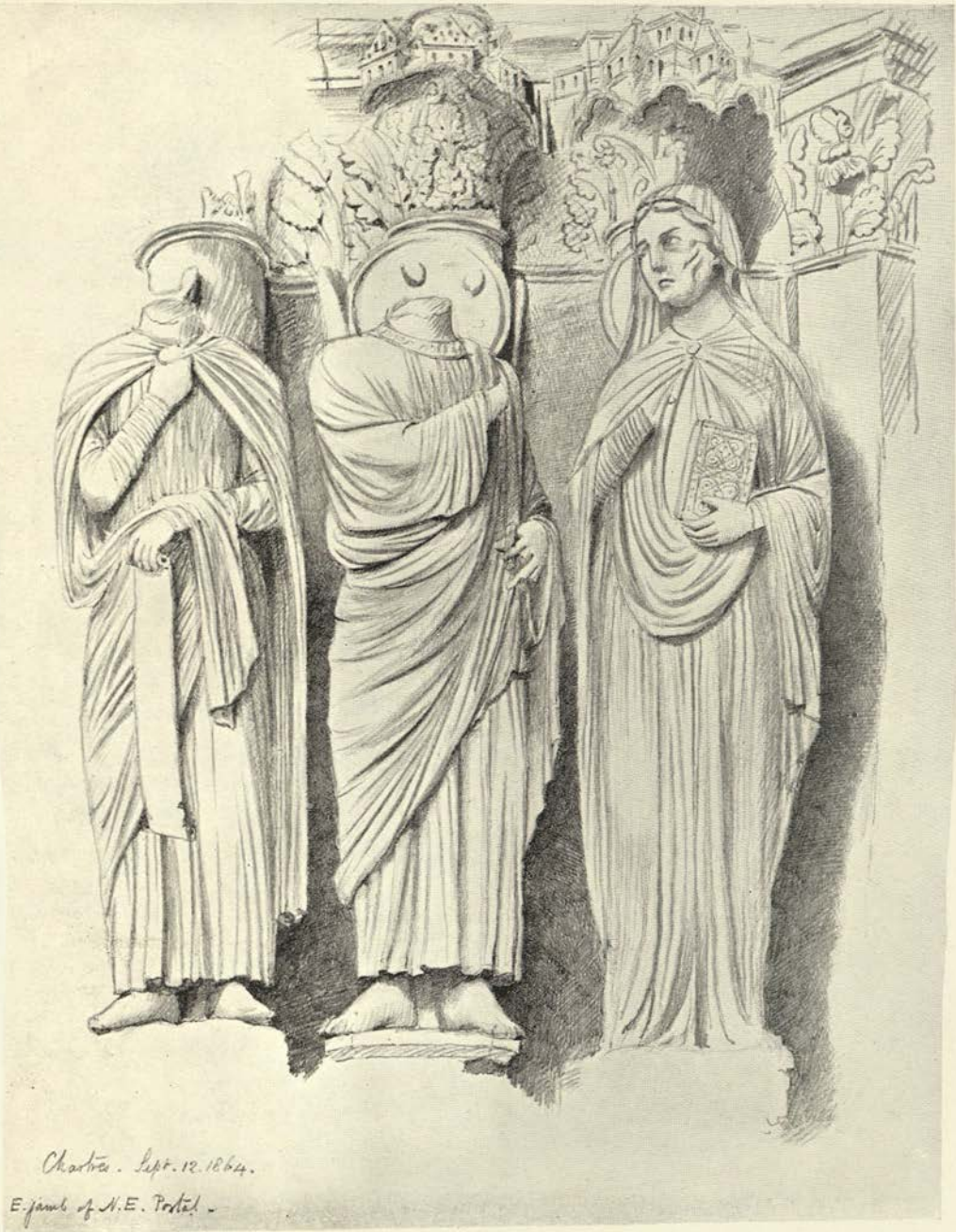
The choir screen

The interior of the choir has been brutally disfigured with Rococo work, but fortunately the fine 16th century sculptures on the ambulatory side of the screen wall have been spared.

The old steeple

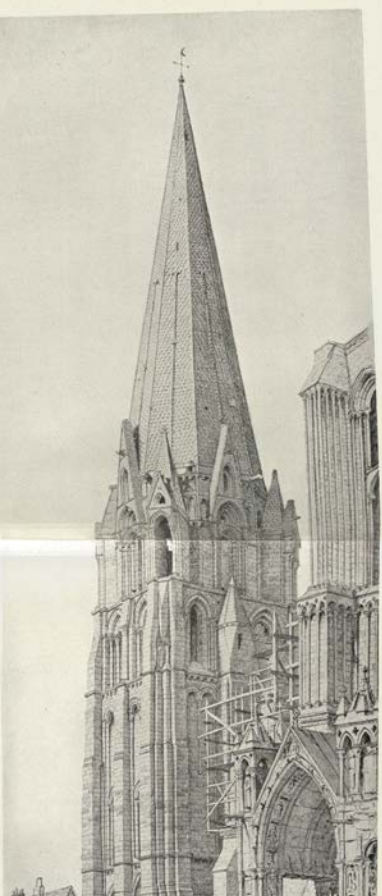
The old tower at the south-west corner (Plate XXII) dates as we have seen from 1145, and was designed to stand clear of the church, which not only was set back, but probably was much lower than the present building. Consequently it is smothered by the present front, and does not do itself justice when seen from the west, and it suffers especially from the heavy arcaded gallery that joins the towers across the gable. It is a magnificently sturdy piece of work, quite the finest 12th century steeple in France, if not anywhere. It rises through three heavily buttressed stages, each shorter than that below, and then breaks into an octagon with four gabled structures placed diagonally to fill out the angles on the oblique faces. On the four direct faces are large windows under a steeply gabled pediment, of a type with which we are familiar in the south of France, at Le Puy,

[1] The sculpture at Chartres is fully illustrated by Mr and Mrs Marriage in their book bearing that title.



T. G. J.

CHARTRES CATHEDRAL



T. G. J. CHARTRES CATHEDRAL—South-West Tower

Brantôme and elsewhere, and also at Vendôme in the north. The apex of this pediment cuts through the cornice which finishes the octagon, from which rises the spire proper, decorated with angle and intermediate rolls, and covered with scaling. The whole design is majestic in the extreme, but it is a little indeterminate as to the division between tower and spire. In our English spires there is never this doubt, but here one may almost as well mark the division at the top of the octagon, where the true pyramid begins, as at the bottom of it where it breaks from the square without any very particular feature to express the transition. This uncertainty is characteristic of many other French steeples. But whatever we may think about this, the old steeple of Chartres is perfectly successful in its outline, whether seen directly or obliquely; and is a magnificent object from every point of view far or near.

Chartres cathedral

We reserve the other steeple for a later chapter.

Chartres cathedral, which, says Viollet-le-Duc, is the most solidly constructed of all the cathedrals in France, stands midway between the earlier churches such as Senlis, Noyon, and Notre Dame at Paris, with their vaulted triforium and low nave arcade, and the later buildings where the French type attained full perfection. It has some awkwardness in the choir vaulting, and in the pillars of the ambulatory which are spaced unequally, and fail in geometrical regularity[1], showing that the builders were still in a tentative stage, though they had made a great advance beyond anything that had been done before.

Place of Chartres in history of architecture

[1] This is perhaps partly due to the necessity of building on Fulbert's substructure.

CHAPTER VI

EARLY FRENCH GOTHIC (*continued*)

Reims cathedral

THE cathedral of REIMS carries the art another step in advance, and may indeed be considered to have brought the model of a French cathedral to perfection. The earliest cathedral was rebuilt by Archbishop Ebbon in 820, to whom the Emperor Louis le Débonnaire lent one of his serfs, skilled in architecture, named Rumaud. It was finished by Hincmar, after 841, and improved by Adalbéron in 976, who is said to have filled the windows with painted glass[1]; and it underwent many other changes before it was burned down in 1210. On the first anniversary of this catastrophe the foundation stone of the present building was laid by Archbishop Aubri de Humbert, and for the next twenty years the work was pushed on with vigour. Large sums were raised by peripatetic quests of the clergy, by Papal indulgences, and by the formation of Confraternities pledged to annual contributions, and in 1241 the chapter was enabled to take possession of the new choir. In 1251 not only were funds exhausted but the building was heavily in debt; fresh appeals restored the finances, but the church was not finished till the end of the 14th century, nor the upper part of the towers till 1427.

[1] ...diversas continentibus historias. *La Cathédrale de Reims*, Demaison.

REIMS CATHEDRAL

Reims cathedral. The architect

It has generally been said that Robert de Coucy was the original architect. He is so styled by Viollet-le-Duc. But it has been pointed out by later writers that the epitaph of Robert de Coucy on his monument in the cloister of the abbey of S. Denis at Reims, which existed in the 18th century, describing him as *Maîstre de Nostre Dame et de Saint Nicaise*, gave the date of his death in 1311, a century too late. Fortunately particulars have been preserved of the labyrinth in the floor of the cathedral, which was destroyed by the canons in 1778 because children amused themselves by running round the maze. At its corners were four compartments containing figures of four *Maîtres de l'œuvre*, each holding the square or compass of his profession: Bernard de Soissons, master for 25 years, "*qui fit cinq voûtes et ouvra à l'O*": Gaucher de Reims, master for 5 years, "*qui ouvra aux voussures et portaux*"; Jean d'Orbais, "*qui encommença la coiffe de l'Église*"; and Jean le Loup, "*qui fut maître de l'Église seize ans et encommença les portaux*[1]." As Robert de Coucy's name did not appear, the pavement would necessarily be older than his connexion with the building, and was probably coeval with the similar labyrinth at Amiens which is dated in 1288. If by the *coiffe* we should understand the *chevet*, where we know the church began, the credit of the general design is due to Jean of Orbais, a town in Champagne with a fine abbey church rather older than the cathedral. M. Demaison suggests that Jean le Loup succeeded him and made the transept portals, and was himself succeeded by Gaucher, who was followed by Bernard de Soissons who made the western bays of the nave, and the great

The architects

Jean d'Orbais architect

[1] *La Cathédrale de Reims*, L. Demaison; see also notes by Professor Willis in his edition of the *Sketch Book of Wilars de Honecort*, p. 208.

Reims cathedral

O or rose window of the façade. He is mentioned in a deed of 1287 as *Maîstres Bernars de Nostre Damme*[1]. Robert de Coucy's share in the work included probably the completion of the west front, and other architects are mentioned after him down to the middle of the 15th century.

The design therefore of this splendid church, the masterpiece of French Gothic, should be credited to Jean d'Orbais, whose general scheme must have been followed by his successors with only such slight modifications as their age suggested.

Change in construction

There is a difference of opinion about the date of the upper part of the choir. Viollet-le-Duc observes that the lower part of the walls of the choir and of half the nave is of unusually massive construction up to the level of the aisle vaults, and that above that level the construction suddenly becomes much slighter. At this point he believes that funds ran short, and that work was suspended from 1230 to 1240 and then begun again; but that the choir was not finished till nearly a hundred years later, during which period succeeding builders followed loyally the design of the original architect[2]. Against this view is urged the improbability of the Chapter waiting a century for their choir, the record in the chronicle of S. Nicaise that the canons occupied the

[1] M. Demaison calculates the careers of these architects thus: Jean d'Orbais 1211–1231, Jean le Loup 1231–1247, Gaucher de Reims 1247–1255, and Bernard de Soissons 1255–1290. But, as he says, this depends on the date of the labyrinth being correctly placed about 1290. It allows also an interval of three years between Jean le Loup and Gaucher. The inscription giving the number of years occupied by Jean d'Orbais was unfortunately illegible when the copy of the labyrinth was made.

[2] C'est ce qui donne à cet édifice un caractère d'unité si remarquable, quoiqu'il ait fallu un siècle pour conduire le travail jusqu'aux voûtes hautes. *Dict. Rais.* vol. II. p. 321.

choir in 1241, and the portrait in the glass of the choir clerestory of Archbishop Henri de Braine who died in 1240. Reims cathedral

In the sketch-book of Wilars de Honecort are five sheets of drawings of Reims cathedral. That showing an inside and outside elevation of a bay, apparently of the choir, represents it as still incomplete: the vault and the flying buttress are absent, and there is only the base of the pier from which the flyer would spring. But unhappily we do not know the date of Wilars' visit, which is variously placed in 1235, 1244, and 1250. The sketches differ so widely from the actual building that M. Lassus imagines them to be copies from working drawings made by Wilars during the suspension of the work after 1231. Professor Willis, with more probability, thinks allowance must be made for the sketchy draughtsmanship of the time, and points out many inaccuracies in Wilars' drawings of the chapels and other parts which we know were certainly finished at his visit, and before his eyes[1]. Everything seems to show there was a change of architect about 1231, when we may suppose Jean d'Orbais died; after which the work was carried on by his successor, apparently Jean le Loup, till in 1241 the choir was roofed in though perhaps not yet vaulted, and was available for service. The completion of the vaults and of the nave, except the four last bays, proceeded as funds came in, and these four bays with most of the west front were finished towards the end of the 13th century. Wilars de Honecort's drawings

Change of architect

The ground plan is simple (Fig. 44). In the nave the double aisle of Chartres and Paris is abandoned, and as there are no chapels between the buttresses the flank The plan

[1] Willis, *op. cit.* p. 220, etc.

Reims cathedral

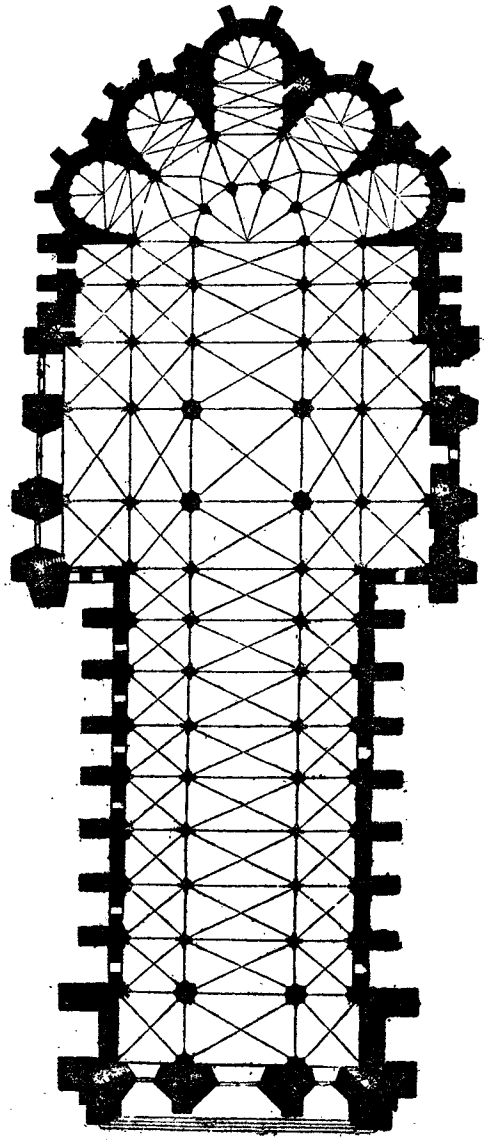


Fig. 44. (V.-le-Duc.)

REIMS CATHEDRAL—A

REIMS CATHEDRAL—B

REIMS CATHEDRAL—West front

of the church has a magnificent effect with its row of massive buttress-piers below, and enriched stages above. A stern simplicity reigns in the interior, which is very noble and impressive, especially in the apse with its cylindrical columns, and well-spaced arches (Plate XXIII). The columns elsewhere are cylindrical with four attached colonnettes. The capitals are in two courses, marked in the colonnettes alone by a necking in the middle. The foliage is more advanced toward naturalism than that at Chartres or Paris, but in the choir it still retains something of the stiffness, and artless arrangement of the earlier type (Plate XXIV A). Advancing westward, however, we find gradually increasing natural treatment in the nave (Plate XXIV B), the foliage being sometimes mixed with figures, as in the famous vintage capital. The last three capitals westward, belonging to the latest stage of the building operations, have foliage of 14th century character, crowded, confused, and inexpressive. The difference is shown in their bases as well as in the capitals, for the quasi-Attic base of the other columns, like that at Paris (Fig. 22 C), with well-modelled toes at the angles, is exchanged for a simpler section without the scotia or hollow moulding.

Reims cathedral

The capitals

The bases

The vaulting throughout is quadripartite, the transverse rib being accentuated, and the arrangement of the construction is masterly, without the tentative efforts of previous examples. The ritual choir is projected into the first three bays of the choir westward of the transept, a local peculiarity which occurs also at S. Remy. Here it was probably occasioned by the great space needed at royal coronations, for it was at Reims that French kings were crowned.

The vaults

In the chapels of the choir *chevet* Jean d'Orbais has

Reims cathedral

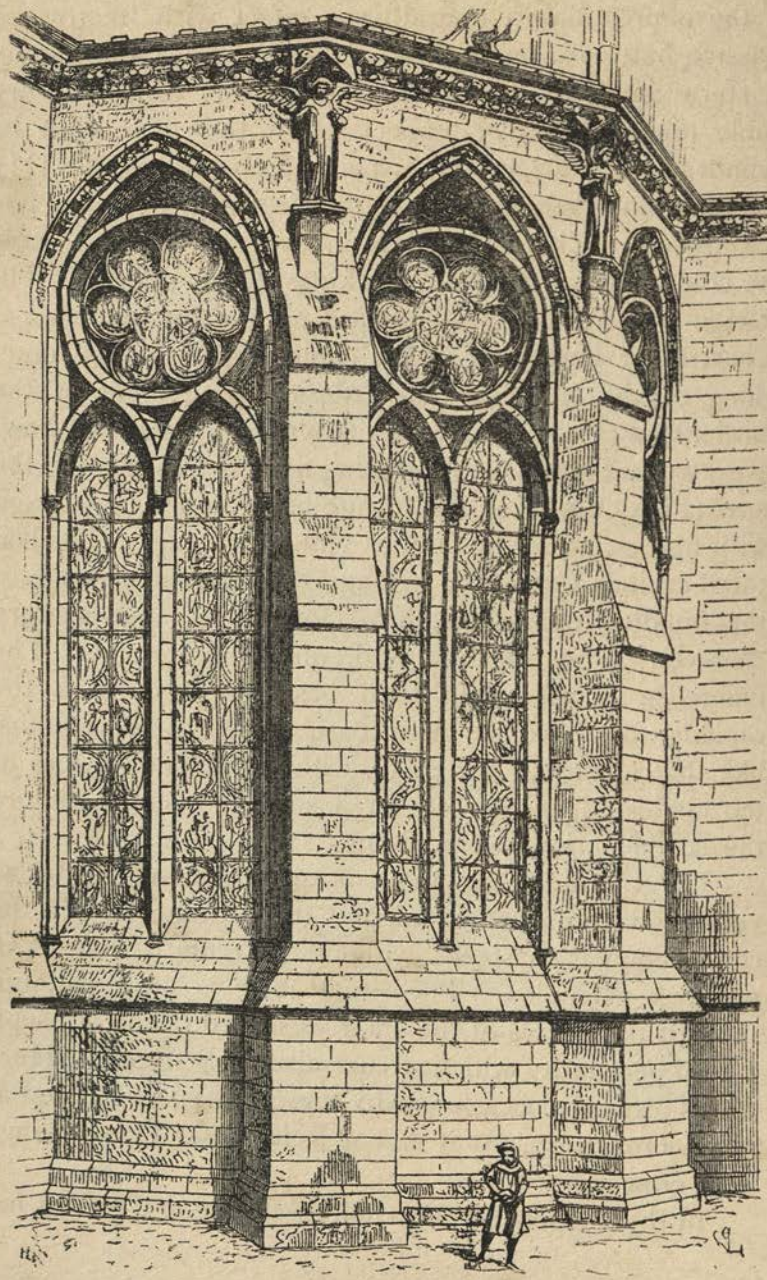


Fig. 45. (V.-le-Duc.)

surpassed himself. They are incomparably the most beautiful of their kind, and it would seem they made a great impression at the time they were built. Wilars de Honecort sketched them in his queer way both inside and out, and writes in the margin "This is how those at Cambrai must be if they are made right[1]" (Fig. 45). The development of the *chevet* with its radiating chapels, from the unpretending projections of Senlis (Fig. 24, p. 67), through the better defined plans at S. Denis, Noyon, and Chartres, was now perfected, and later examples are only variations on what we find at Reims. In their plan these chapels show a change of purpose, for they begin with a circular base, which at the window cill is converted into a polygon, so as to provide a flat plane for the two-light traceried window between the buttresses, and escape the distortion which we see in the earlier examples, where windows are opened in a curved surface. Reims cathedral

In these chapels, which must have been built up to the cornice before 1230, are perhaps the earliest examples of bar tracery. The windows are of two lights, uncusped, and carrying a circle with sexfoil cusping. All the windows throughout the church are of the same kind, varying only in the width of the lights, which are compressed in the apse so that the circle is of the full width of the two lights, and the arch very highly stilted. But the subject of the development of tracery must be reserved for a future chapter. The window tracery

Except the upper part of the towers and of the part between them, which is later, the west front (Plate XXV), was finished at the end of the 13th or the beginning of The west front

[1] "Dautretel maniere doivent estre celes de Canbrai son lor fait droit." Willis, *op. cit.* Plates LIX and LX. pp. 217 etc. Wilars is believed to have been architect of the now vanished cathedral at Cambrai.

Reims cathedral. The towers

the 14th century. The towers were intended to carry spires of stone on their central octagon between four spirelets on the angle tabernacles, and the base of these spires is actually started. But, as at Laon, this open structure, consisting largely of slender detached columns, seems quite unsuited to carry such a load. The front has the usual three great portals, but their tympana are not sculptured, and are filled with glazed tracery. Above is the great O, the rose window of Bernard de Soissons, in which geometrical bar tracery is perfectly developed.

The sculptures

The jambs and arches of the portals are filled with very remarkable figure sculptures. They are not all of one date, and those of the same date are not all by the same hand. The figures of the right jamb of the right-hand door are archaic, and are identical with some in the middle door of the north transept at Chartres, which are dated between 1220 and 1225. It may be debated which set is the original, and which the copy, and the explanation offered for them here is that they were carved in advance, and laid by till they were wanted. Another idea is that the west front was first built farther back where the break above noticed occurs, and that these figures were removed thence when the church was lengthened by royal command to its present extent[1]. They are in marked contrast to the figures in the opposite jamb which are very fine, and inferior only to those in the middle portal. These are beyond all praise, and the finest mediaeval figures I have ever seen. The sculpture of the Middle Ages culminates in the four figures of the Annunciation, and the Salutation (Plate XXVI). In the former the Virgin has an air of delightful simplicity, and

[1] M. Demaison thinks this an impossibility, but it was done as we know with the west front at Chartres (*v. sup.* p. 98).

REIMS CATHEDRAL

REIMS CATHEDRAL

the angel smiles,—the angels at Reims have an irresistible smile that makes you smile too;—but the other group of the Salutation of Mary and Elizabeth is indeed by a master hand and is worthy to rank with the masterpieces of antiquity. The draperies are magnificently composed, and the heads, which are obviously taken from life, are beautiful and expressive in the highest degree (Plate XXVII). There are other figures in the series scarcely less excellent. What they want in technical perfection is compensated by a character and a spirituality of expression unknown to Greek sculpture. In a side doorway of the north transept on the *trumeau* is a statue of Christ of unusual beauty and dignity. Reims cathedral

It would take too long to multiply examples of early Gothic buildings in other parts of France. At CHÂLONS-SUR-MARNE in Champagne the church of Notre Dame has pointed arches, a vaulted triforium gallery, with a second triforium above which is combined with the clerestory windows, and an apse with chapels resembling that at S. Remy. In Burgundy the fine choir of the abbey of VÉZELAY was built between 1198 and 1206, for which the convent ran into debt, and deposed its extravagant abbot[1]. The apse is supported on monolithic columns, there are many traces of classic detail, and round arches are used side by side with pointed ones. The church of S. Pierre at LISIEUX is a fine example of early pointed work in the north. But it was in the Ile de France that the style first reached that full development which is described in the following chapter. Châlons-sur-Marne. Notre Dame

Vézelay choir

Lisieux. S. Pierre

[1] Illustrated by Viollet-le-Duc. *Dict. Rais.* vol. I. p. 231–232, and in my *Reason in Architecture*, Plate XIII.

CHAPTER VII

AMIENS AND BEAUVAIS

Amiens cathedral

THE cathedral at AMIENS is regarded by most writers as the perfect flower of French Gothic. It is on an enormous scale, and lavishly decorated, and both inside and out it is undoubtedly one of the most remarkable buildings in Europe. It was begun at the west end, instead of as was usual at the east, the object probably being to save the ancient church of S. Firmin till a sufficient part of the new cathedral was built, before pulling it down to make way for the new choir. The first stone was laid by Bishop Evrard de Fouilly in 1220, and the nave seems to have been occupied in 1236 in the time of his successor, Geoffroy d'Eu. This included the nave to the top of the vaults, and the west front with the statuary of the great portals and the rose window above them. The choir followed, and the radiating chapels of the apse were finished in 1247. Funds then ran short, work was suspended till 1258, and the choir was not finished till 1269, a date which appears in the glass of the apse clerestory. The side chapels of the nave were added rather late in the 14th century, and in 1366 the completion of the west front from the gallery above the rose was undertaken; but the north tower was not finished till the 15th century.

AMIENS CATHEDRAL

Amiens cathedral. The architects

A labyrinth, or "house of Daedalus[1]" in the floor, which was destroyed in the last century, and is now replaced by a copy, had an inscription in brass round the centre, giving the date 1220 when the church was begun, and the names of Bishop Evrard, King Louis, and the three architects employed on the work, the last of whom says he placed this inscription here in 1288.

* * * * * *

Chil qui maistre yert de l'œuvre
Maistre Robert estoit nommes
Et de Luzarches surnommes
Maistre Thomas fu après luy
De Cormont et après
Ses filz maistre Regnault qui mettre
Fist à chest point chy ceste lettre
Que l'incarnacion valoit
XIII^{c} ans XII en faloit.

In the centre were figures of the bishop and the three masters of the work, inlaid in white marble[2].

There is nothing to tell us what part each of the three took in the design, unless an inscription over the south transept door, of which the date 1220, a mention of the first stone, and the name Robert could alone be

[1] A labyrinth engraved on a pier of the portico of the Duomo of Lucca has an inscription beginning thus:

HIC QVEM CRETICVS EDIT DEDALVS EST LABERINTHVS

The use of labyrinths in church floors has not been explained. Viollet-le-Duc, *Dict. Rais.* vol. VI, suggests a masonic symbolism: and as they seem connected with the names and figures of architects that may be so. He says they do not occur before architecture passed into lay hands. They were sometimes called "the road to Jerusalem," and the devout traced the route on their knees, but only a few labyrinths were large enough for that.

[2] This central piece, much mutilated is said to be now in the museum at Amiens. *La Cathédrale d'Amiens*, G. Durand. The author points out that Master Regnault de Cormont has made a slip in his chronology, for Louis VIII did not succeed till 1222. The inscription makes him king in 1220.

Amiens cathedral

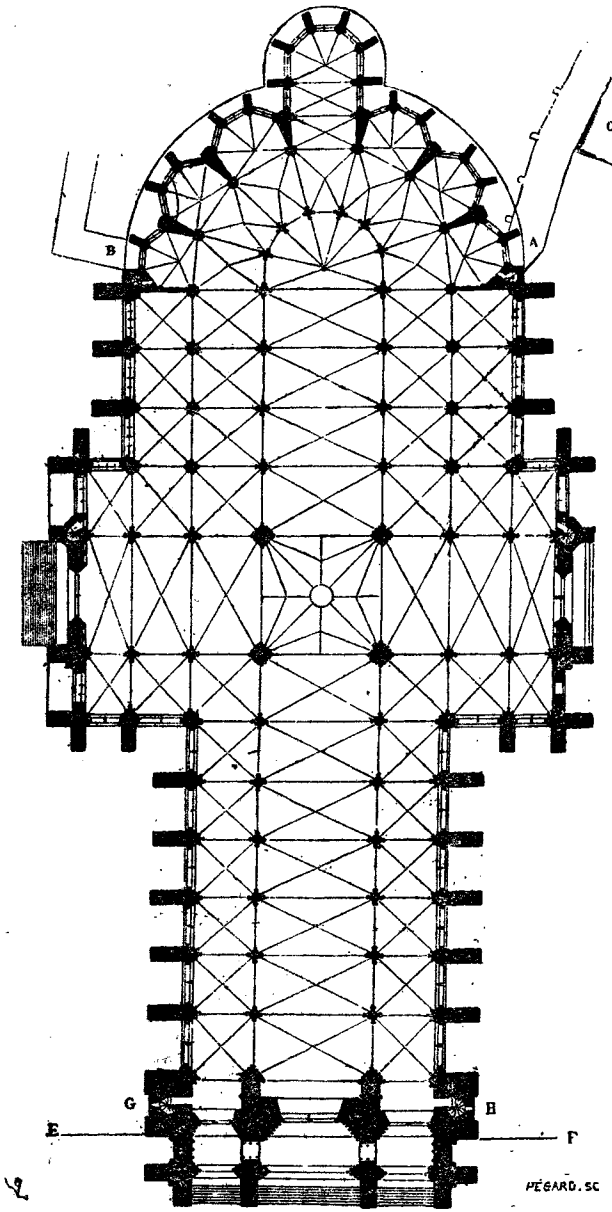


Fig. 46. (V.-le-Duc.)

read, may be taken to show that Robert de Luzarches carried the work thus far. Amiens cathedral

Before the addition of the nave chapels the plan (Fig. 46) was very like that at Reims. There was a nave with a single aisle on each side, a transept with aisles and a choir of four bays with double aisles ending The plan

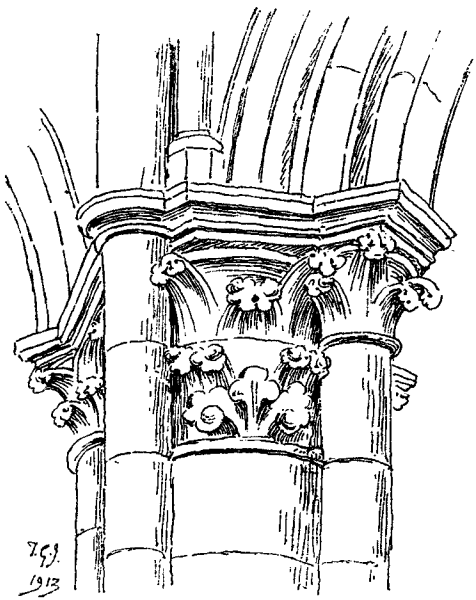


Fig. 47.

in an apse and ambulatory aisle from which apsidal chapels radiated. As at Reims these chapels open directly into the ambulatory and fill the space from buttress to buttress, leaving no room for windows into the aisle as at Chartres and Bourges. At Chartres and Paris the chapels project beyond the second ambulatory aisle, at Reims and Amiens they occupy the place of it.

The columns are cylindrical with four attached colonnettes, of which the one that runs up to take the nave The columns

Amiens cathedral

vault has only the abacus moulding round it (Fig. 47). The capitals are rather more advanced than those at Chartres, but are still simple. Those of the colonnettes are shorter than that of the main column, unlike those at

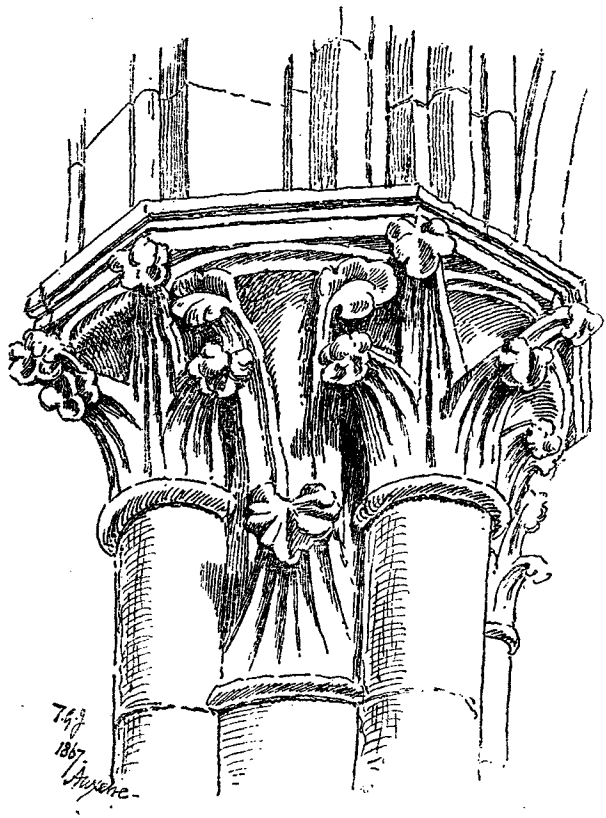
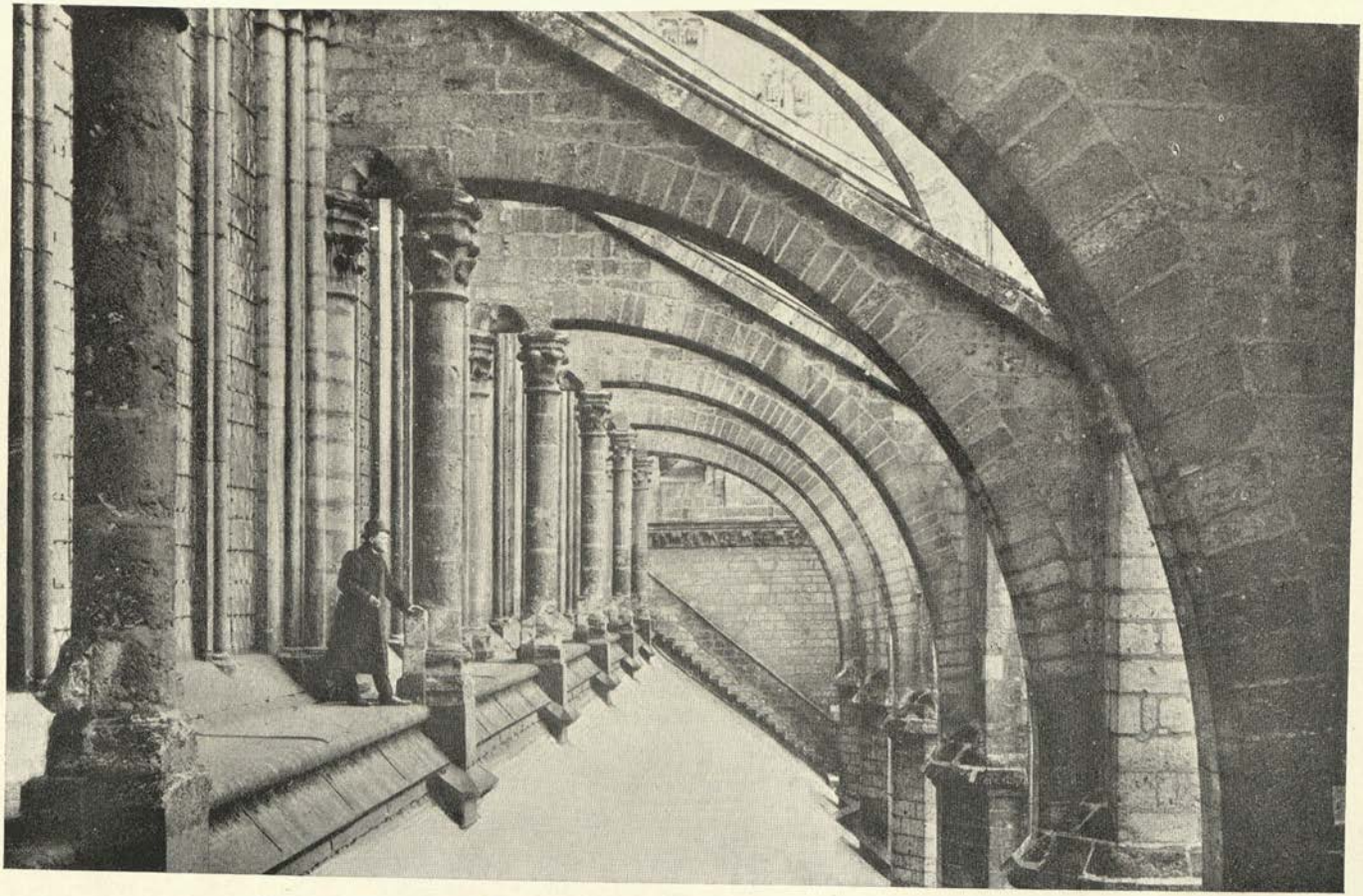


Fig. 48.

Reims (Plate XXIV, p. 108), and this feature became the common arrangement in later French Geometrical Gothic. Fig. 48 shows a capital of this kind in a later stage of development at AUXERRE. The bases (Fig. 22 D, p. 63) are well profiled, and good examples of the



AMIENS CATHEDRAL—Triforium terrace and flying buttresses of Nave

AMIENS CATHEDRAL—The Nave
Drawing by G. G. Scott, junior

mediaeval version of the Attic base. The vault is quadripartite and the wall ribs are much stilted to give ample room for the large clerestory windows of four lights in the nave, and six in the transepts and choir (Plate XXVIII). Amiens cathedral

The triforium in the nave has three lights with slender shafts carrying a great trefoil of plate tracery with foliated tips to the cusps, and below it runs a string course of beautifully carved foliage (Plate XXX). The triforium has a back wall in which is a relieving arch, and above it is a terrace outside the clerestory windows, which are set to the inside of the wall. On this terrace stand columns carrying the head of the flying buttresses, leaving room to pass behind them (Plate XXIX). The nave buttresses are massive with two tiers of simple flyers, and the flank of this part would have been as fine as that of Reims but for the chapels added in the 14th century which spoil it. The triforium

The buttresses

There are two triforium openings of three lights each in the bay, and here, as at S. Germain des Prés, where it was done perhaps for the first time[1], the triforium and clerestory are connected by running the shafts of the upper storey down into the lower (Plate XXX). As the style progressed these two storeys were more and more closely associated, till in some of the later churches both in England and France they are practically united into one composition.

The choir, which is later than the nave, seems to be by a different and inferior hand. Perhaps Robert de Luzarches was dead and Thomas de Cormont had taken his place. There is an attempt at greater splendour; the clerestory is increased, the triforium which has The choir

[1] *v. sup.* p. 76 and Fig. 28.

Amiens cathedral

double tracery, the outer face being glazed, is filled with geometrical tracery and surmounted by an unmeaning crocketted gable on the inside, and the two flyers of the buttresses outside are united by tracery-work which gives them a very heavy and ungraceful air. The spacing of the apse bays is not so successful as at Reims, or even at Chartres. The columns are too near together and the arches are pinched up, too narrow and too highly stilted, and this in a church of such enormously high proportions has a very unsatisfactory effect. The chapels of the apse are very lofty, and in themselves beautiful, especially within; but outside they dwarf the central apse of the choir, which is still further smothered by the double traceried flying buttresses, and can hardly be seen.

The chapels

Difficulty of planning the apse

Adequate spacing of the apse columns was the most troublesome problem that the French architect of the 13th century had to solve, in spite of the fact that he could make them slighter than the other columns, as they only received one vaulting rib instead of three. As each bay of the apse radiated from the centre through the aisle to the chapel beyond, if the apse columns were too far apart the width of the bay at the outer circumference became too great for vaulting. On the other hand if the convenience of vaulting the aisle alone were studied the apse columns would be drawn too near together. At Paris the architect succeeded in making the bays of the apse about as wide as those of the straight part, by the ingenious method, explained above, of multiplying the columns in the aisle[1]. Where, as at Bourges and Vézelay, there are only five apsidal chapels the trouble was less, and more liberal space could be

[1] *v. sup.* p. 79 (Fig. 29), & p. 82.

AMIENS CATHEDRAL

allowed: but at Amiens there are seven, and the result is that the apse arches are cramped and the columns crowded too closely together. Amiens cathedral

The west front (Plate XXXI), which is the work of Robert de Luzarches, is a magnificent composition, perhaps rather overdone with ornament, but still a masterpiece. Compared with Reims I think on the whole Amiens has the finer façade. The towers here are more solid: at Reims the stage above the portals is pierced, and you look through and see the flying buttresses of the nave beyond, and this gives an air of weakness: at Amiens the openings do not begin till above the roof level. The pediments also over the portals are better managed here, for the clustering tabernacle-work on the middle gable at Reims is unhappy. In both fronts the pediments conceal more or less the lower part of the tower buttresses, and this according to M. Colfs[1] puts them both out of the pale of Gothic architecture, but this is less the case at Amiens than at Reims. In splendour of sculpture there is not much to choose between them, but if Amiens can show sculptured tympana where Reims has only windows, there is nothing at Amiens to equal the groups of the Annunciation and Salutation at the other church (Plate XXVI, p. 114). West front. The façade compared with Reims

The figures here are by different hands, and of various degrees of merit. The statuary on the whole fared pretty well at the revolution, owing to the pride the people of Amiens took in their cathedral, and their efforts to save it from mutilation. Many heads and hands, however, were knocked off and have been re- The sculpture

[1] Un pareil résultat démontre à la dernière évidence que les architectes de cette cathédrale n'ont jamais connu le style gothique proprement dit. *L'école Gothique Allemande*, p. 92, J. F. Colfs (Bruxelles, 1892). He calls it sculptor's work, not architect's.

Amiens cathedral

placed, but not much restoration was needed in the great portals. That of the south transept, *la Porte de la Vierge dorée*, has on the *trumeau* or central pier the figure, charming in its natural expression, of the Virgin smiling at the Child on her arm, while three little angels flutter round her head. But the statues in the jambs are poor works; the faces are clownish, and the whole very second-rate. Possibly they have been a good deal mended. The sculpture in the arch and tympanum is superior.

Far finer is the work in the great west portals (Plate XXXII), with the famous figure of Christ,—*le beau Dieu d'Amiens*,—on the central pier. In its sublime abstraction it has, as M. Durand says, the "impassive majesty of the Egyptian statues, or the Greek primitives, and that apparent rudeness which at first sight is disconcerting[1]." The fine early Christ of the royal portal at Chartres is sterner, and more powerful, and that on the north transept at Reims more human and sympathetic; the three together combine to make a wonderful presentment of our divine Lord and Saviour.

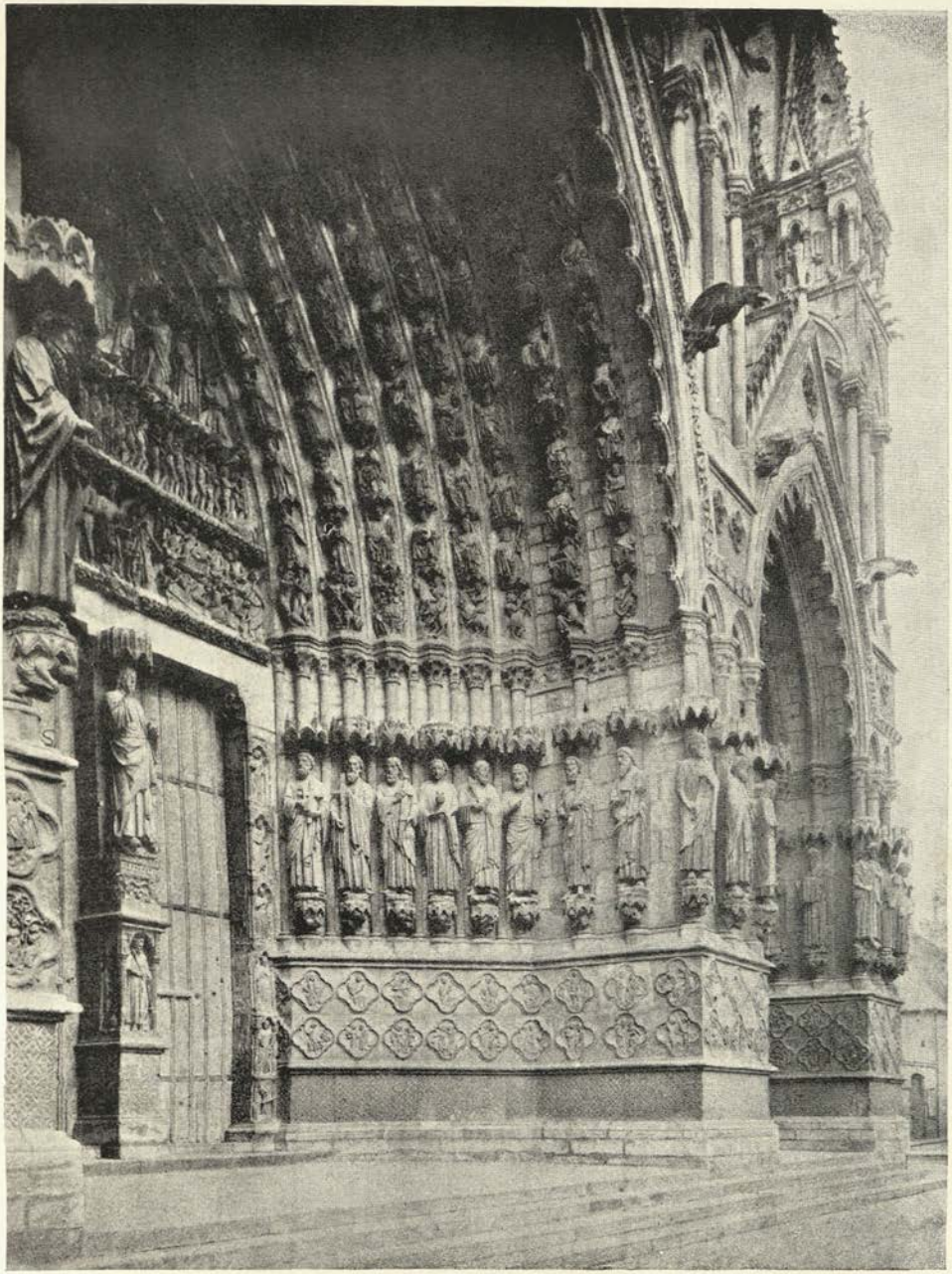
Amiens, the Gothic ideal

In comparing these great Gothic churches together it would, as M. Durand very wisely says, "be childish to enquire which to place first. Still," he continues, "what nobody will deny to the cathedral of Amiens, is that it is the monument in which Gothic art has displayed the plenitude of its system and its resources, where it has most closely approached its ideal, where decisive solutions have been found, and where in a word we have the type of Gothic construction[1]."

Its logical completeness

All this is quite true. We have here in perfection all the system of thrust and counterthrust, necessary to satisfy Mr Moore. The points of support are isolated,

[1] *op. cit.* p. 51.



AMIENS CATHEDRAL—West Portal

and the walls between them are reduced to mere curtains to enclose the building, made mostly of glass. Each vaulting rib descends separately on its capital clear of the rest, and has its own separate shaft to carry it. The whole construction is visibly expressed by the architectural form. Every problem involved in building a great Gothic church is solved, and there seems nothing further to be done in the way of improvement. Amiens cathedral

It is perhaps this very perfection that to some extent robs it of its interest. You miss that restless energy, that forward push, that yearning and striving for something better, which characterises all the work of the Romanesque period, and all the earlier Gothic work we have till now been engaged in describing. For their youthful vigour is substituted a classical repose which is alien to the northern temper. Revisiting the idols of our youth after a long interval, one looks at them with a fresh eye, and I must confess that when I saw Amiens again the other day I failed to rise to the level of its ardent admirers. Its splendid scale, its vast height and spaciousness impresses you with a feeling of satisfaction and successful achievement, and yet somehow it left me cold. The façade with its glorious sculpture indeed leaves little to be desired, but the interior seems too fine-spun,—too much drawn-out,—too lofty for its width. The proportion of the arcade to the superstructure strikes me as disagreeably high, though the same proportion at Westminster on a scale one-third smaller is agreeable. The triforium in the nave, with its shallow including arch and its plate tracery, is very poor and shadowless, and has a thin papery look, while that in the choir I think ill-designed and almost ugly. I have already mentioned the crowding together of the apse columns and the consequent pinched Its aesthetic effect

Amiens cathedral

look of those bays and this is the more observable on account of the immense spread of the clerestory windows in the nave and the straight bays of the choir, which almost provoke a feeling of insecurity.

In all these particulars the interior of Amiens must yield to that of Reims, where the construction is scarcely less scientific, but is not pushed to the verge of peril, and the whole design is virile and reassuring.

Beauvais cathedral

From Amiens it is natural to go to BEAUVAIS, to see the great church which was designed not merely to rival but to eclipse its neighbour.

Bishops existed at Beauvais in the 9th century, and one of them was killed by the Normans in 851. The

The Basse Œuvre

nave of an early cathedral known as the *Basse Œuvre* still remains, though it has been restored to death, and only a few patches of the original facing remain. It has been variously dated in the 6th, 7th, and 9th century, but it is now supposed to be the church of which the foundation was laid by Bishop Hervé in 990. It was injured by fire in 1180 and 1225, and in 1227 Bishop Milon de Nanteuil resolved to build a new cathedral. The present choir was begun in 1247.

By this time the nave of Amiens was finished and the choir well advanced, and its magnificence provoked the men of Beauvais to do something still finer. From first to last they suffered from megalomania which re-

Rivalry with Amiens

peatedly brought them into trouble. The vault of Amiens was 141 ft. high; theirs should be 13 ft. higher. The construction at Reims was light and daring, theirs should be still lighter and more audacious. But no sooner had their ambitious dimensions been reached than the vaults

Failures of construction

fell in for want of proper abutment. In 1272 they were rebuilt only to fall again in 1284, and then the builders

were forced to introduce three additional columns on each side, to support the middle of the arch and halve its span. These repairs occupied forty years, and it was not till 1500 that the great transepts were begun, when the art had passed into the flamboyant stage. A new nave was to follow and one bay was actually begun, but then another fit of megalomania attacked the builders. This time it was not Amiens but S. Peter's at Rome that inspired them to emulation, and they built a gigantic spire over the crossing, near 500 ft. high, with an aperture in the vault to let you look up to the top from the floor. This steeple, which, to judge from the views of it that have been preserved, must have been very ugly, stood for little more than 20 years, and then the piers gave way. It fell in 1573, bringing down with it a considerable part of the transept and choir.

Beauvais cathedral

The tower

Fall of the tower

Beauvais therefore is but a fragment—a colossal fragment, of a too ambitious design. From its history you might expect to find it a mere pretentious *tour de force*; but it is not so. The outside naturally is an amorphous mass, all head and arms and no body, though the early part, when seen without the rest, has a charm of its own. But the interior of the choir is strangely beautiful (Plate XXXIII). I know hardly any interior which dwells in the memory so vividly, and this is the more curious because accident has almost as much to do with it as design. The great height of the vault, which is extraordinary, does not so much matter. It is only little minds that take magnitude for greatness, and a design must not be valued by feet and inches. Many a building of only moderate dimensions is able to impress you with a sense of sublimity. As Burke finely says "designs that are vast only by their dimensions, are always the

Height of vault

Beauvais cathedral

sign of a common and low imagination. No work of art can be great, but as it deceives; to be otherwise is the prerogative of nature only." For me, Beauvais is many degrees more beautiful than Amiens; for where Amiens is coldly correct Beauvais is lovely[1]. The double windows in the clerestory, resulting from the sexpartite vault here, while that at Amiens is quadripartite, are far more beautiful than the great single windows at the other church; and the straight bays, narrowed by the intruded columns, carry on the scale of those round the apse, and avoid the original abrupt passage from narrow arches to wide. All this of course results not from the original design but from the alterations made after the fall of the vaults in 1284, when the straight bays were halved by the intruded columns. Before then they were 28 ft. wide, centre to centre, the vault was quadripartite, and the clerestory window would have sprawled as widely as those at Amiens. For the narrow bays in the clerestory are inconsistent with the original wide arch, of which the outline may still be traced in the wall: the middle vaulting shaft, descending to the intruded column, cuts it in two (Plate XXXIV). Never was an accident more fortunate, for it is the narrowness of the bays, and the new proportion given to the triforium and clerestory that makes this interior unlike any other, and

Superiority to Amiens in beauty

Partly accidental

[1] I cannot help quoting a letter I had in 1896 from one with whose judgment I have always been glad to find myself in accord, my late friend, Richard Norman Shaw. "I am so pleased to hear that you like Beauvais so much, as I like it myself....I have not seen it for fifteen or sixteen years, but I know the outside fetched me immensely. And why it is so fine, and why Cologne (that I was looking at the other day) is so hideous, is not easy to say, except that it looks all right at Beauvais and all wrong at Cologne. Street would never listen to Beauvais,—said it was not to be compared to Amiens,—and shut me up sharp. I shall go again and see it perhaps this year; I have been wanting to go for ever so long."

BEAUVAIS CATHEDRAL

T. G. J.

BEAUVAIS CATHEDRAL

gives it its peculiar beauty. The same reason explains the sexpartite vault, because the choir being over 50 feet wide from centre to centre of the columns and the length of the bay being now reduced to 14, a quadripartite vault over such a long and narrow bay was hardly conceivable. Beauvais cathedral

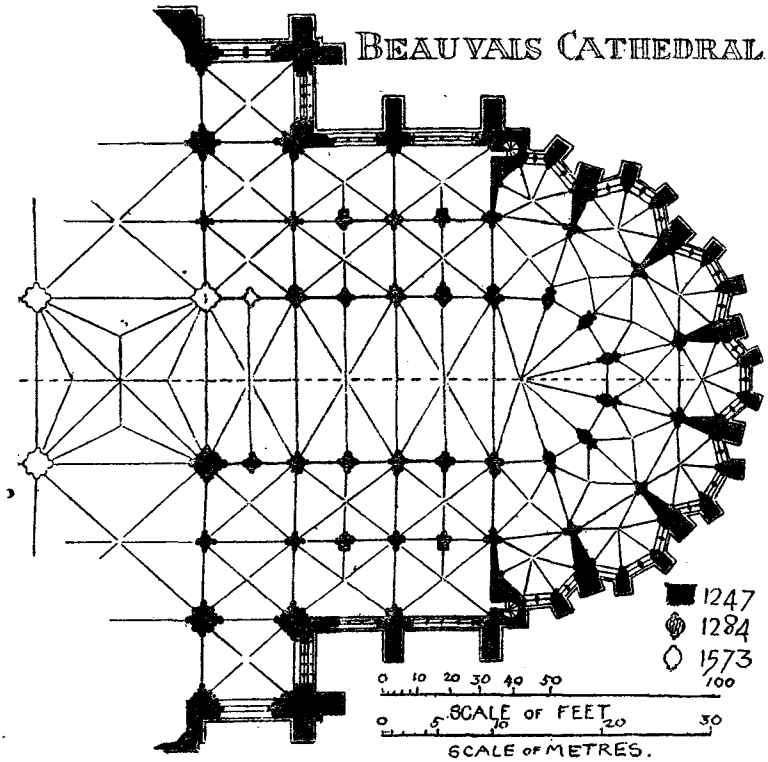


Fig. 49.

Fig. 49 is a plan of the choir, in which the original and intruded piers are distinguished, as well as those which were rebuilt after the fall of the tower in the 16th century. Only one of the original four piers at the crossing remains, that at the south-east corner; the rest Plan of choir

Beauvais cathedral

were rebuilt in the flamboyant style as well as the first intruded pier on the north side. The area of the original pier is barely 64 square feet, and the load on it at a rough calculation, in which I am probably below the mark, is not less than 12 tons per square foot. To have added that vast tower to this was little short of madness[1].

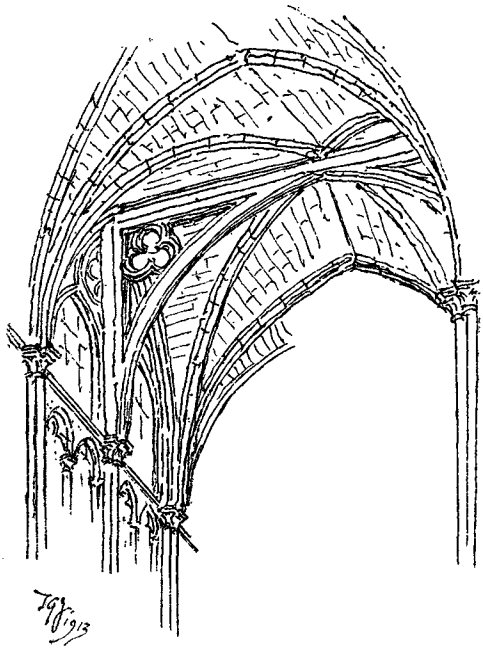


Fig. 50.

The aisle vaults

The use made of the intruded piers in the aisles is curious. The original quadripartite vault of the wide bay is retained, though in the choir it is turned into sexpartite, but at the intruded pier a skeleton rib (Fig. 50) is thrown across the aisle to support the crown of the

[1] According to modern rules the load that can safely be placed on ordinary stone, per square foot, varies from 5 to 8 or 9 tons and on Portland stone 14 tons. But I have no doubt this is constantly exceeded in great mediaeval churches.

Beauvais cathedral

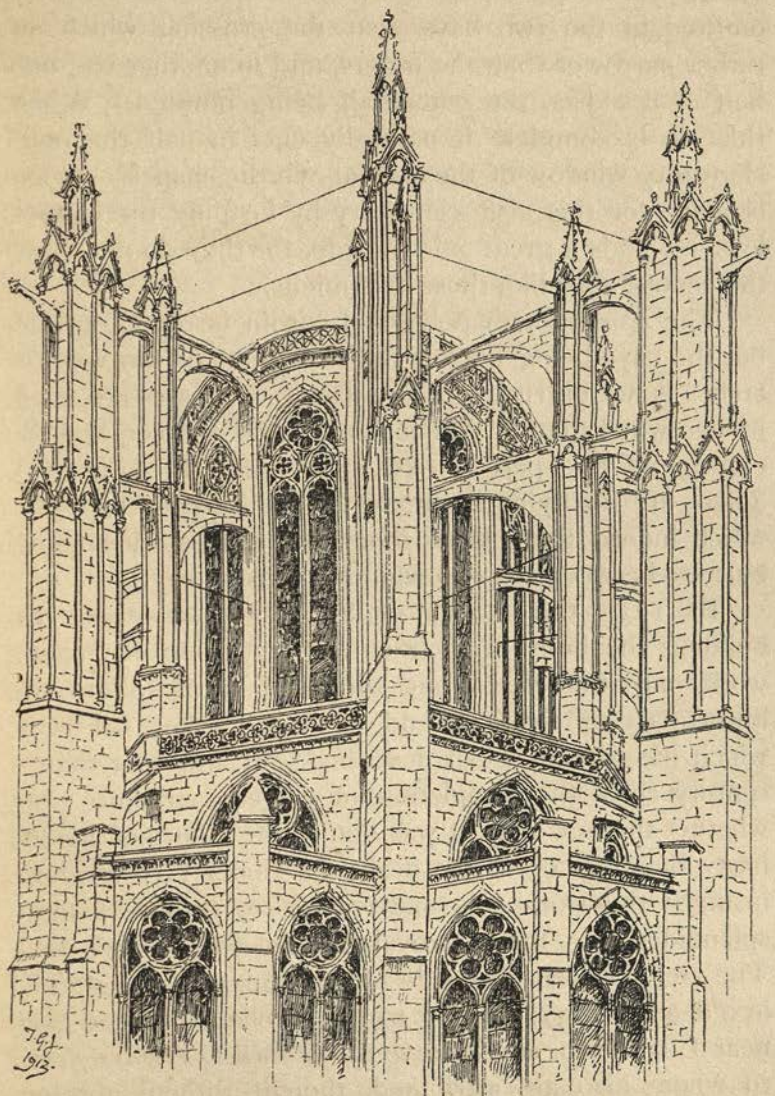


Fig. 51.

Beauvais cathedral

vault, with a square top and pierced spandrils. This is omitted in the two bays next the crossing which are rather narrower than the others, and in another bay only half of it exists, the outer half being omitted. Where this rib is complete it naturally cuts in half the outer clerestory window of the aisle above the chapels. Room is made for this aisle clerestory by keeping the chapels low. This is a great gain outside, for they do not dwarf the central apse like those at Amiens.

The apse

The apse though polygonal within is round outside, but the bays being narrow the distortion of the window arches is not obtrusive. The flying buttresses are much less crowded than at Amiens and much simpler, and the exterior of this part is extremely successful (Fig. 51). There are no flying buttresses to the intruded piers, for which indeed there is no room, but only a flat shallow buttress between the two windows in each bay.

S. Denis. The choir and nave

In 1231 the monks of S. DENIS set about rebuilding the body of their church, retaining of Suger's work only the west front with the narthex, and the lower part of the east end, with the crypt below it, which has already been described. It was less than a century since the completion of Suger's structure; but whether the new project was due to the failure of his too hasty building, or to the desire of Louis IX, at whose instance the work was undertaken, to provide a more splendid shrine for the royal burials, we are not told.

The architect

The architect was Pierre de Montereau, who is described in a deed of 1247, relating to the purchase of stone from near Charenton, as *Cementarius de Sancto Dionysio*, and to whom also are attributed, though without absolute proof, the Ste Chapelle of the Royal Palace, that of S. Germain en Laye, and the refectory of S. Martin des

Champs at Paris. Pierre's new choir, nave and transepts are in the fully developed Gothic style. The arcades are lofty, the piers slender and composed of groups of shafts, the vaulting shafts rising from floor to springing. The clerestory is spread as widely from pier to pier as that at Amiens, and the clerestory and triforium are combined by running the mullions of the windows down to those of the triforium. The idea of the glazed triforium in fact amounts to a continuation of the clerestory window into the storey below it on the outside as well as on the inside; on the inside the tracery of the triforium had already at Amiens been united with the window above. The device had its inconveniences, for the aisle could no longer have a pent roof against the main wall as heretofore, but had to be covered either by a flat or by a span-roof, which made it difficult to get the water away from the interior gutter. But it gives an extraordinary effect of lightness to the construction, and of this the transept end at S. Denis is an extreme example, the whole being occupied by an enormous rose window, resting on a delicate arcade ranging with that of the triforium, and pierced with a continuous range of windows. It is impossible to conceive a more airy construction than this gossamer web of masonry.

S. Denis. The new building

The glazed triforium

Its inconvenience

Lightness of construction

This glazing of the triforium, of which S. Denis perhaps set the example, was a recovery of the lights that had illuminated the great vaulted triforium galleries of Paris, Noyon and Laon. When these galleries were given up for a mere passage in the wall as at Reims and Chartres these windows disappeared with them, for the pent roof of the triforium covered the outside of the triforium storey. They now reappeared, but instead of being over the outer wall of the aisle they were brought

Recovery of triforium windows

S. Denis

forward to the main wall of nave or choir. This was another logical deduction from the principles of Gothic vaulting, according to which the wall between the skeleton of piers is only a curtain, which may be pierced and reduced to the margin of mere stability.

The apse, of which the plan of course is Suger's, is very effective both inside and out, and the flying buttresses are extremely well designed (Fig. 19, p. 60 *sup.*). The apsidal chapels were covered by Debret in the 19th century with flat slabs of stone: originally they no doubt had high-pitched timber roofs. The whole effect of the interior, which has a great deal of painted glass is fine, but it is verging towards the attenuation of the 14th century. Pierre de Montereau did not live to finish his work. He died in 1267, and the building seems to have been finished in 1281, according to his design.

Paris. The Sainte Chapelle

Pierre de Montereau is generally supposed to have been the architect of the Ste CHAPELLE at PARIS, which was built by Louis IX between 1245 and 1248, to receive the inestimable relic of the Crown of Thorns. The king had bought this at an enormous price from Constantinople, and the rival crown, which the monks of S. Denis pretended to show, was entirely thrown into the shade by this new acquisition. The Sainte Chapelle (Plate XXXV) was the private chapel of the Royal Palace which is now incorporated in the modern Palais de Justice. It has an upper and lower storey: the lower one, depressed and vaulted with an interior row of columns, served the royal retainers, the upper contained the sacred relics, and was used by the Court. A winding stair in a turret at the corners connects the two together.

The upper chapel which measures 115 ft. × 36 ft. and 66 ft. in height, is very simple in plan, consisting of four

PARIS—SAINTE CHAPELLE

straight bays with large four-light windows, and seven narrow bays with two lights forming the apse (Fig. 52). There being no aisles, the vaults, which are quadripartite, are sustained directly by buttresses. These buttresses are in fact walls set at right angles to the interior, and there are no others from the window cills upwards: the whole structure is a lantern of glass, divided by very slender spars or piers of masonry.

Paris. The Sainte Chapelle

In the windows we find the system of Gothic tracery perfectly developed without any of the tentative attempts that we see at Reims. But the subject of window

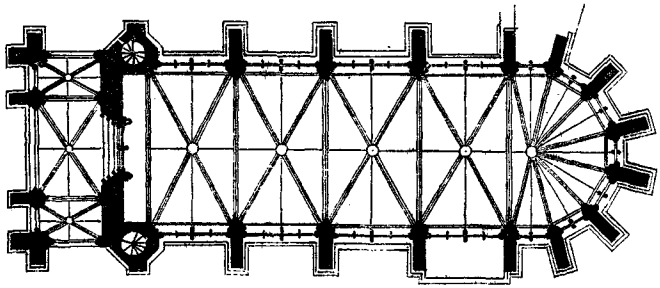


Fig. 52. (V.-le-Duc.)

tracery will be more fully dealt with in a special chapter hereafter.

At the west end is an outside porch, and in the gable a large rose window which was inserted at a later date in place of the original design of Pierre de Montereau.

The whole chapel has been a good deal restored, but it retains most of its fine original glass, among other modern work; for the old glass was partly dispersed, and two of the lights may be seen in our museum at South Kensington. The walls have been painted in modern times with mock-mediaeval patterns and with an unhappy result.

CHAPTER VIII

THE PROVINCIAL STYLES IN FRANCE

NORMANDY

WE have now traced the history of Gothic architecture in France to its full development in the Royal Domain, of which the typical instances are Amiens and Beauvais. But the art followed a rather different course in the provinces, and though the influence of the central school affected all the local styles more or less, many of them never fully yielded to it.

Resemblance of architecture in Normandy and England

Normandy is so near our shores, and was long so closely attached to the English crown, that it is not surprising that of all the Gothic schools in France the Norman school should be most like that of England. In many ways it was formed amid circumstances like our own. Neither in England nor in the north of France were there any remains of Roman architecture comparable to those of Provence and Burgundy; and of all Romanesque schools, the Norman on both sides of the Channel is least affected by classic example. For want of good models, such as those that inspired the sculptors of Arles and S. Gilles, Norman carving was rude and barbarous during the 11th and earlier part of the 12th centuries; ornament was generally confined to

Slight influence of Classic

Rudeness of early Norman sculpture

abstract and conventional forms, zigzags, billets, and nail-heads, which simple at first became, as the style progressed, elaborated with a great deal of art. Figure sculpture during this period was rarely attempted, and on those rare occasions unfortunate. The carver's greatest successes were in grotesques, in which our rough northern humour took a special delight. It was not till quite late in the 12th century that Norman sculpture either in England or in Normandy approached that of contemporary schools in merit.

Connexion between Normandy and Lombardy

I have elsewhere[1] described the connexion between Norman architecture and that of Lombardy, on which in the 11th century it was largely based, through William of Volpiano, Lanfranc of Pavia, and other ecclesiastics from North Italy whom the Norman dukes invited to their province. The influence of the church of S. Ambrogio, and possibly other Lombard buildings still older, of which S. Ambrogio itself was the outcome, may be traced at Jumièges and other great Norman buildings of the 11th century. During this period Normandy seems to have progressed rapidly and to have outstripped the other schools of France. The duchy was settled, firmly governed and prosperous under its masterful dukes, while the royal domain of the Ile de France was comparatively weak and disorganized, with the result that architecture there was backward. Things were reversed in the following century. Normandy was drained of men and means by the conquest of England, to which country the court was transferred, and it was afflicted by the struggles between the Conqueror's sons for the possession of the Duchy. On the other hand the consolidation of the royal power in France under Louis VI, Louis VII, and Philip

Early advance of architecture in Normandy

Its decline there

[1] *Byzantine and Romanesque Architecture*, vol. II. chap. XXIV.

Augustus was reflected by the astonishing outburst of architectural art in the royal domain which we have already reviewed. It is said that during the 12th century Bayeux Cathedral was the only great building erected in Normandy.

French influence on Normandy

With the French conquest at the opening of the 13th century art revived in Normandy, and came naturally under the influence of the French school. The great churches of that period at Caen, Rouen, Seez, Coutances and others are mainly in the new Gothic style, though the Normans seem always to have worked with a special manner of their own. Mouldings were elaborated more than was usual in central France, where in the 13th century they seldom advanced beyond a simple roll on the angle, and the greater development of mouldings is an English characteristic. The projecting label or hood-mould which is usual over the interior arches in English Gothic is not uncommon in Normandy, but so far as I know it does not occur elsewhere in France. At Rouen, Seez, Bayeux, Coutances, Dol, and Le Mans we find piers and columns with a round abacus instead of the square or polygonal form usual in French Gothic, and this too is an English feature. In many of the façades, as for instance at Lisieux, Seez and Coutances the rose window so typical of French design is wanting: in the front of the cathedral of Rouen it is comparatively insignificant, and there is none in the flamboyant façade of S. Maclou. Normandy also seems to have been the cradle of sexpartite vaulting, the origin of which we have seen at the Abbaye aux Hommes at Caen, whence it spread far and wide into the Ile de France, to Paris and Sens. Among minor Norman peculiarities may be mentioned the balustrades to the triforium gallery, of which there are instances in the Abbaye aux Hommes,

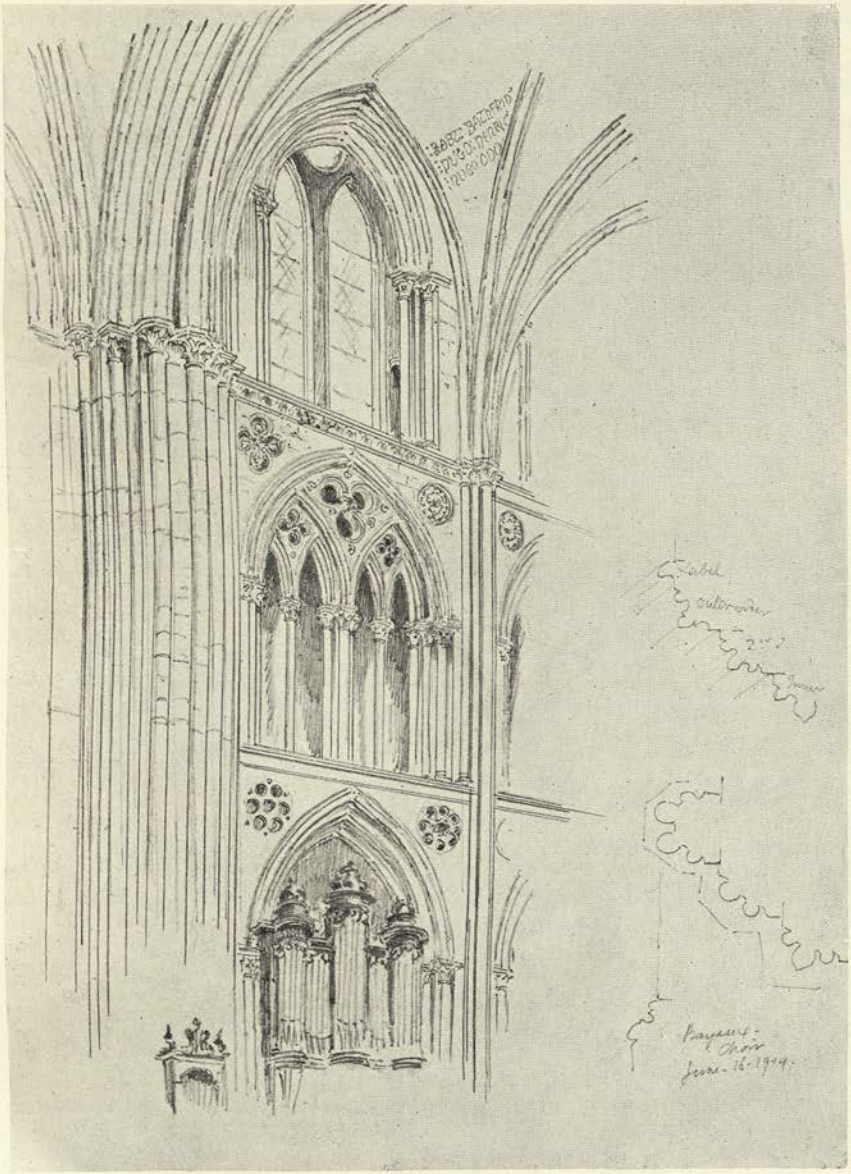
Norman mouldings

Interior labels

Round abacus

Sexpartite vaults

The balustrades



T. G. J. BAYEUX CATHEDRAL—The Choir

S. Pierre at Caen, and in the cathedral of Seez. The corbel tables in which Norman buildings abound both in Normandy and England are no doubt inherited from Lombardy. Arcading with interlacing arches was a favourite ornament peculiar to the Normans, who carried it with them as far as Sicily, where we find it at Palermo, Cefalù, and Monreale, and in Italy at Amalfi and in the Gulf of Salerno, which was affected by Sicilian influence. In Normandy there is an early example of it at the church of Graville a few miles from Havre, and in England it abounds at Canterbury, at Castle Acre and Castle Rising in Norfolk, at S. Cross in Hampshire, at Malmesbury and in Christchurch Priory. There are faint survivals of it in the porch at Wells and in the apse at Norrey.

Interlacing arcades

Another special feature in Normandy is the central tower, which in England is a regular constituent part of our great churches, but is very unusual in other parts of France. It occurs at Caen in both the great abbeys, at Rouen in the cathedral, S. Ouen and S. Maclou, at Bayeux, Lisieux, Coutances, Norrey, Bretteville, and numerous other churches both great and small, and is generally open from below as a lantern with a fine effect.

Central towers

But with these peculiarities the Gothic of Normandy did in the main follow the style of France. The fine cathedral of S. Pierre at LISIEUX, which was begun after the fire of 1136 by Bishop Arnoult (1143—1181) and finished by his successor before 1218, is designed quite in the French manner, and the interior is very like that of Notre Dame at Paris (Fig. 53). It is transeptal, and has a nave of eight bays with pointed arches carried on stout monocylindric columns. The capitals are tall, with simple foliage *à crochet*, except some at the west end

Lisieux cathedral

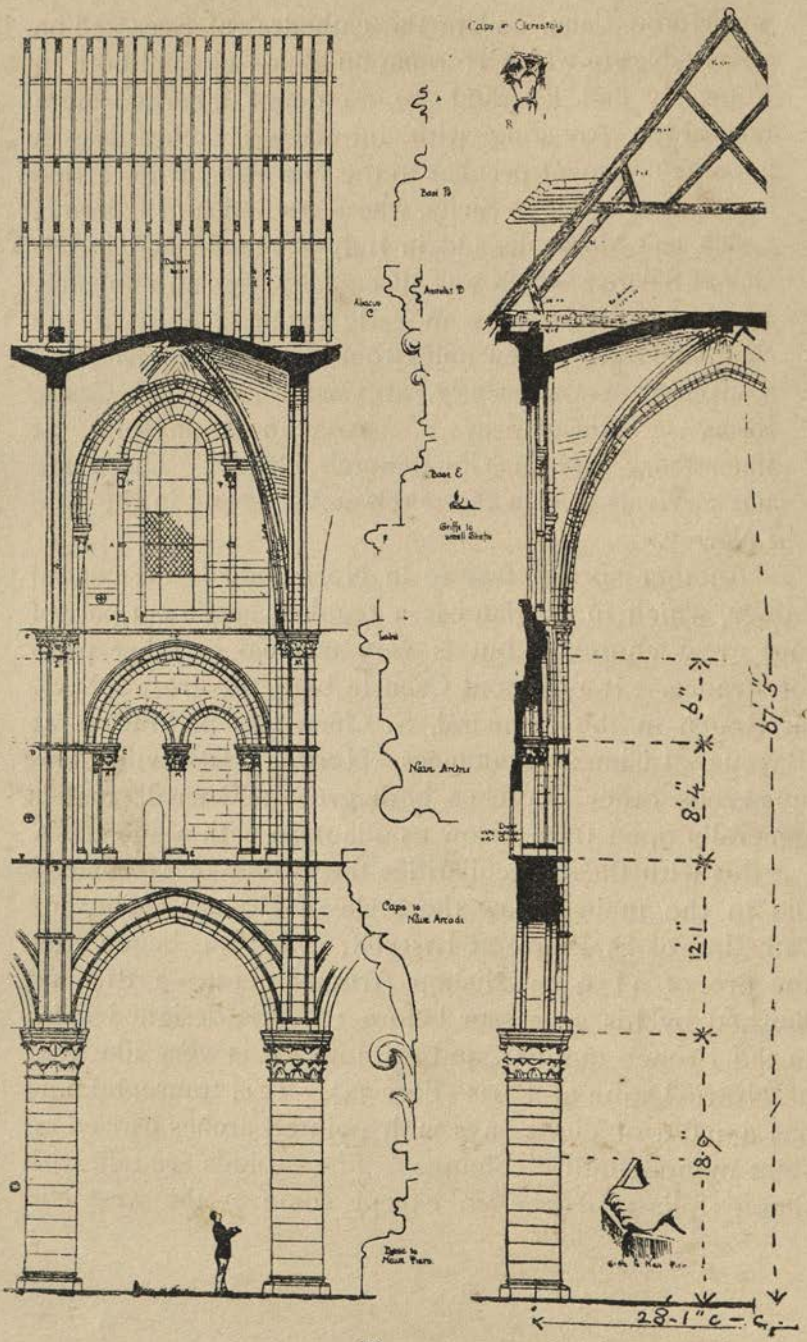


Fig. 53.
From the "Building News"

which are more richly designed[1]. The four straight bays of the choir are similar. The triforium has two lights under an including arch: the shield is blank except in the two eastern bays of the choir where it is pierced with a trefoil. The *chevet* consists of seven narrow bays; the first two straight, the rest in a semicircle. The work in this part seems later and I should imagine is part of the restoration by Bishop Pont-de-l'Arche after the fire of 1226, who added the side chapels of the ambulatory. The arches are richly moulded, whereas in the choir and nave they have only a roll on the angle of the order, and the detail of the triforium with its slender colonnettes, and the quatrefoil piercings in the shield is much more delicate and advanced than that of the rest of the building. The apse columns are doubled with small shafts set between them on each side (Fig. 54), and the radiating ribs are continued in a curious way beyond the central boss up to the first transverse arch.

Lisieux cathedral

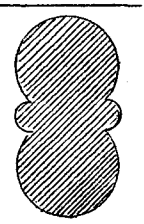


Fig. 54.

In the earlier nave and choir there are triple vaulting shafts with bases resting on the main capitals, as at Notre Dame in Paris. All the vaulting is quadripartite, and all the arches are pointed, and the vault a good deal domed up. The central tower is open as a lantern.

The interior of this church is as fine as anything in French Gothic. The only point about it which is especially Norman is that the gables of the front and the two transepts have mullioned windows instead of a rose.

The cathedral of BAYEUX is an architectural puzzle. Ordericus Vitalis[2] says Odo the Conqueror's half-brother,

Bayeux cathedral

[1] Illustrated by Viollet-le-Duc, *Dict. Rais.* vol. VIII. p. 229.

[2] *Ord. Vit.* Lib. VIII.

Bayeux cathedral

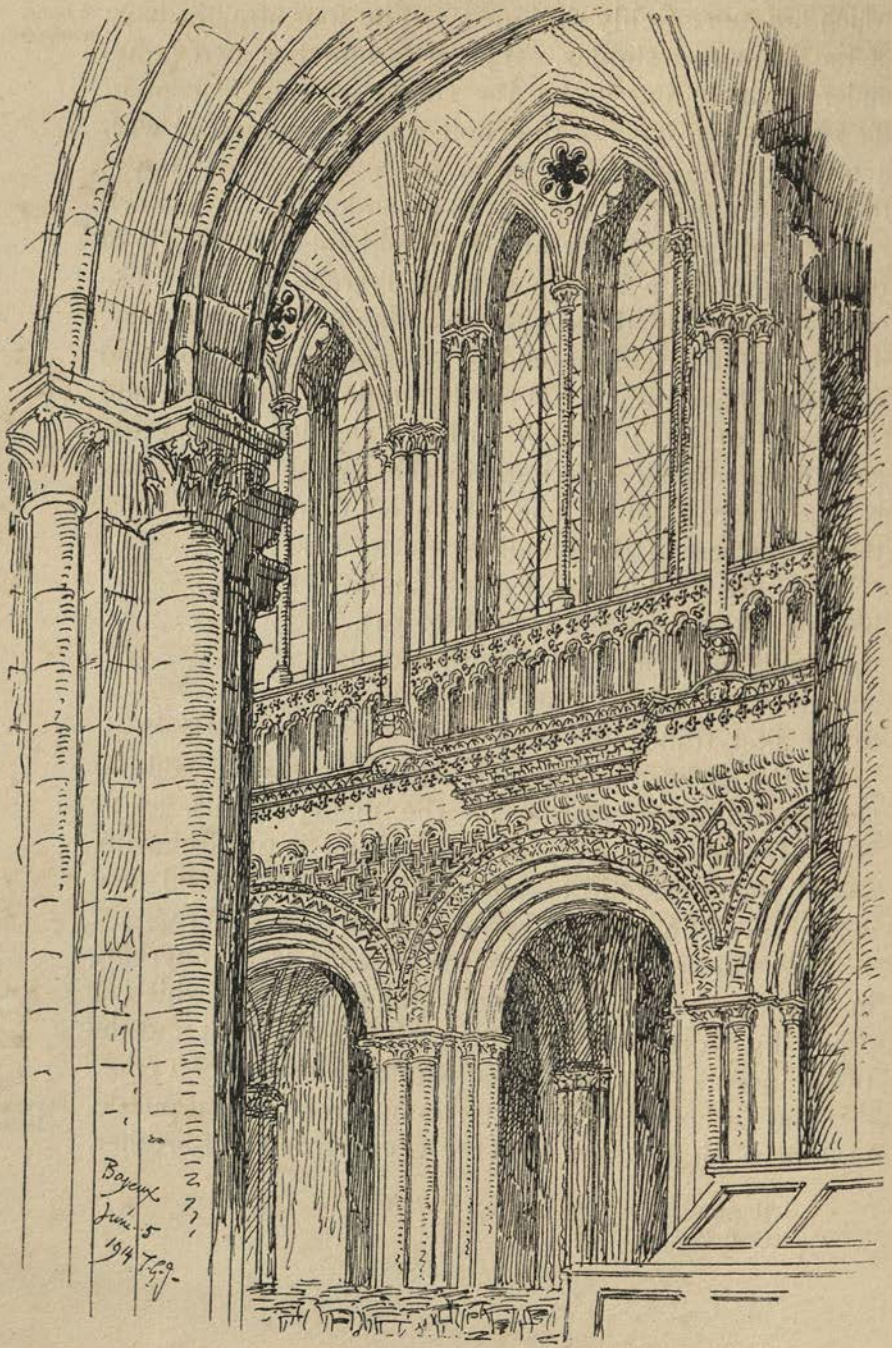


Fig. 55.

the fighting bishop of Bayeux, began a church here in 1086, which he finished splendidly. This church was burned in 1106 by King Henry who afterwards rebuilt it. Another fire preceded by an earthquake occasioned a fresh rebuilding in 1159[1], but the consecration seems not to have taken place till 1231. About the choir there is not much difficulty. It reminds one somewhat of Bishop Northwold's presbytery at Ely, which was built between 1235 and 1251. It has plate tracery, sunk and carved paterae, rich undercut mouldings with pointed rolls, and a label on the inside over the triforium (Plate XXXVI). The abaci are square or octagonal, the vaulting shafts run up from the floor, and the clerestory has a passage in the wall, an inner arch, and a pair of lancets in the outer wall. All the vaults are quadripartite, and that over the crossing under the central tower has ridge ribs, English fashion.

Bayeux cathedral

The choir

The difficulty lies in the nave (Fig. 55). Here we have a late Romanesque round-arched arcade, with square orders, the inner with a roll moulding, the outer decorated with Norman ornaments, frets, zigzags, and birds' heads. They rest on huge clustered piers, with diaper work in the spandrils of interlacing scrolls and basket plaits, in the style of the 12th century. The capitals, however, are all in a much later style (Fig. 56), and cannot be earlier than beginning of the 13th century, when the upper part of the wall, containing a combined triforium and clerestory, was placed on the Romanesque arcade. The consecration of 1231 probably followed the completion of this work and that of the choir.

The nave

[1] Du Moulin, *Hist. Gen. de Normandie*, ed. 1681. Cited by Porter, vol. I. p. 288. 'Philippus Cathedralem suam incendio concrematam restaurasse legitur...ad annum 1159. *Gallia Christiana.*

Bayeux cathedral

As it is impossible that the carving of the capitals can be of the same date as the arches they carry, I can only suppose one of two things: either that they were left in block when the arcade was built in 1159, and not

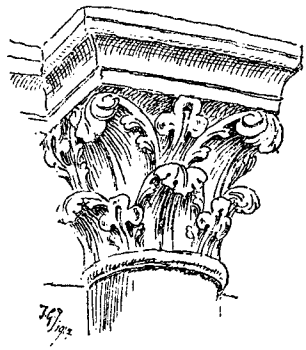


Fig. 56.

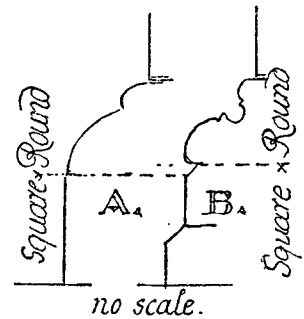


Fig. 57.

carved till the 13th century, or that the arcades were rebuilt in the 13th century, using again the masonry of the early arches and spandrils. As bearing on the latter theory, I observed that while the piers have a very early base (Fig. 57 A) the clustered responds opposite them in the aisle wall have good Gothic bases (Fig. 57 B) with angle toes.

The English leaf

At Bayeux and the neighbourhood alone in France, so far as my observation goes, do we find that typical early English leaf which played so great a part in the foliaged capitals of our native Gothic during the 13th century, from York and Lincoln in the north to Winchester and Chichester in the south, and from Westminster in the east to S. Davids in the west. In both the examples here given (Figs. 56 and 58) it appears, and in one (Fig. 58) the whole capital is composed of it.

There is no distinct triforium in the nave, but there

is a passage in the wall below the tall clerestory windows which have inner tracery, in the English manner. In Bayeux cathedral

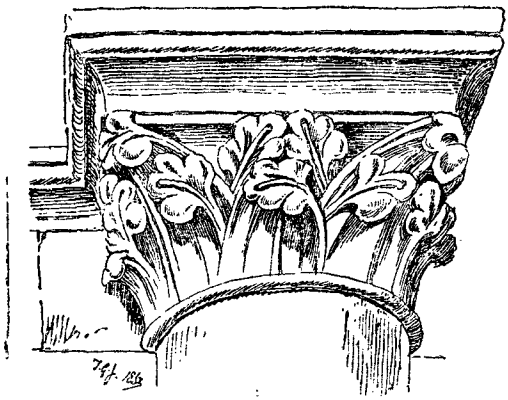


Fig. 58.

one bay a shallow gallery is bracketed out for a platform on which the organ would have been placed (Fig. 55).

All vaults throughout the church are quadripartite. The ornamentation is conventional, and sculpture inside the church is confined to heads on brackets under the gallery, the capitals, and a few rude panels with figures in the spandrils of the arcade. The west portals, which are later, have sculptured tympana, and the usual figures in tabernacles in the orders of the arch. The west front and transept have traceried windows but no rose.

Of the 12th century cathedral at ROUEN nothing remains but the Tour S. Romain and the two side portals of the west front, dedicated to S. Jean and S. Etienne. The main part of the building is subsequent to a destructive fire in 1200, and the nave was probably finished before 1240. The two side portals, that of *La Calende* at the south transept, and that of *Les Libraires* on the north, were finished at the end of the 13th century, about Rouen cathedral

Rouen cathedral

1280; the Lady chapel was built in the 14th century, the foundations being laid in 1302, the Tour du Beurre in 1487, and the gorgeous west front between 1509 and 1530.

The nave

The nave (Plate XXXVII) has eleven bays of pointed arches resting on clustered piers very deeply moulded.

The false triforium

Above is a second arcade, also on clustered jambs, a false triforium open to the aisle, like those at Lucca, Genoa, and Rochester. A way along the top of the arcade wall where the triforium floor should have been is carried very queerly round the pier on the side towards the aisle by a sort of balcony, supported on colonnettes which rest on a wide capital, from which the vault of the aisle would have sprung had the triforium been a real gallery. It would seem that the architect's original design was to make the usual gallery, such as those at Paris, Noyon, and Senlis, and that he prepared his arcades in two storeys accordingly, but that when the time came for turning a vault over the first storey of the aisle he changed his plan for the present one, and devised these balconies[1] to avoid losing the passage along the wall.

The real triforium

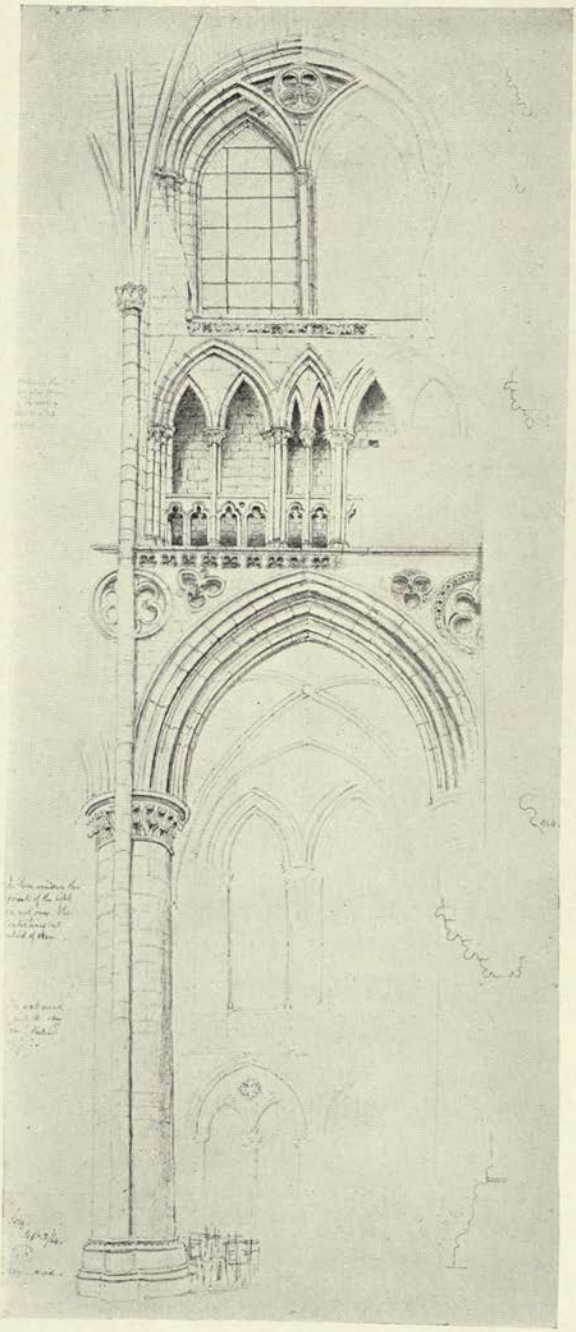
There is a real triforium above with a passage through the piers, under a segmental arch from pier to pier, with a balustrade of little arches on colonnettes. Above is a clerestory of four lights with late geometrical tracery. In the four eastern bays the triforium is enclosed by a screen of 14th-century open work, mullions of which run up into those of the clerestory. This construction allows of very lofty and fine windows in the side aisle, occupying the height of two storeys in the nave.

The choir

The choir is simpler and more in the regular French style. It has five straight bays with lofty monocylindric

[1] Illustrated by Viollet-le-Duc, *Dict. Rais.* vol. VI. p. 18.

ROUEN CATHEDRAL



T. G. J. SEEZ CATHEDRAL—Nave

columns bearing capitals *à crochet* and a round abacus. The triforium consists of six pointed arches on colonnettes, and the clerestory has late geometrical tracery of very slight masonry. The aisles and chapels have plain lancet lights, and so, no doubt, had the clerestory originally. There are only three apsidal chapels; the Lady chapel in the middle, dating from 1302, is prolonged, the other two are original, and leave room for a pair of wide lancets in the ambulatory wall between them and the Lady chapel. Rouen cathedral

All vaults are quadripartite and domed, and the transverse is slightly pointed. The central tower is open as a lantern for two storeys in height.

In adopting the less massive and more scientific construction of French Gothic, the Normans sometimes pushed the light construction to excess, as in the cathedral of SEEZ, which when I saw it in 1864 was in a very dangerous state. The nave was begun about the middle of the 13th century and finished before 1292[1]; the choir was rebuilt after a fire in 1260 on the insufficient foundation of the older building, and therefore constructed with extreme and perilous lightness[2]. The nave has a magnificent west portal, sadly mutilated, however, in which still hang the original doors of the 13th century, covered with arcading in woodwork. The columns of the nave arcade are very lofty, mono-cylindrical with one vaulting shaft attached in front, and with the round abacus already alluded to: and the base also is round. The triforium is of a very peculiar design, with its triple arcades of Seez cathedral

[1] Bishop John of Bernieres who died in 1292 was described in his epitaph as "aedificator ecclesiae Sagiensis." Dumaine, cited by Porter II. 324.

[2] Viollet-le-Duc, *Dict. Rais.* vol. II. p. 358. He remarks on the dangerous state of this church, which was then under repair.

Seez cathedral

two lights each (Plate XXXVIII), the middle one the narrowest, the others divided unequally by the colonnette, so that the outer light is narrower than the inner; and as the point of the including arch is brought over the centre of the colonnette, it is awry. The lancet lights of the aisle also have their points outside the central line in the same way. The clerestory has two enormously wide lights, and instead of advancing the glass and tracery to the inner wall-face as at Amiens and elsewhere in the Ile de France, it is set in the Norman way on the outside wall-face. Consequently we have the clerestory passage in the wall thickness, and the second tracery on the inside of the wall, which were inherited from the Romanesque style, and which are almost universal in the great Gothic churches of England.

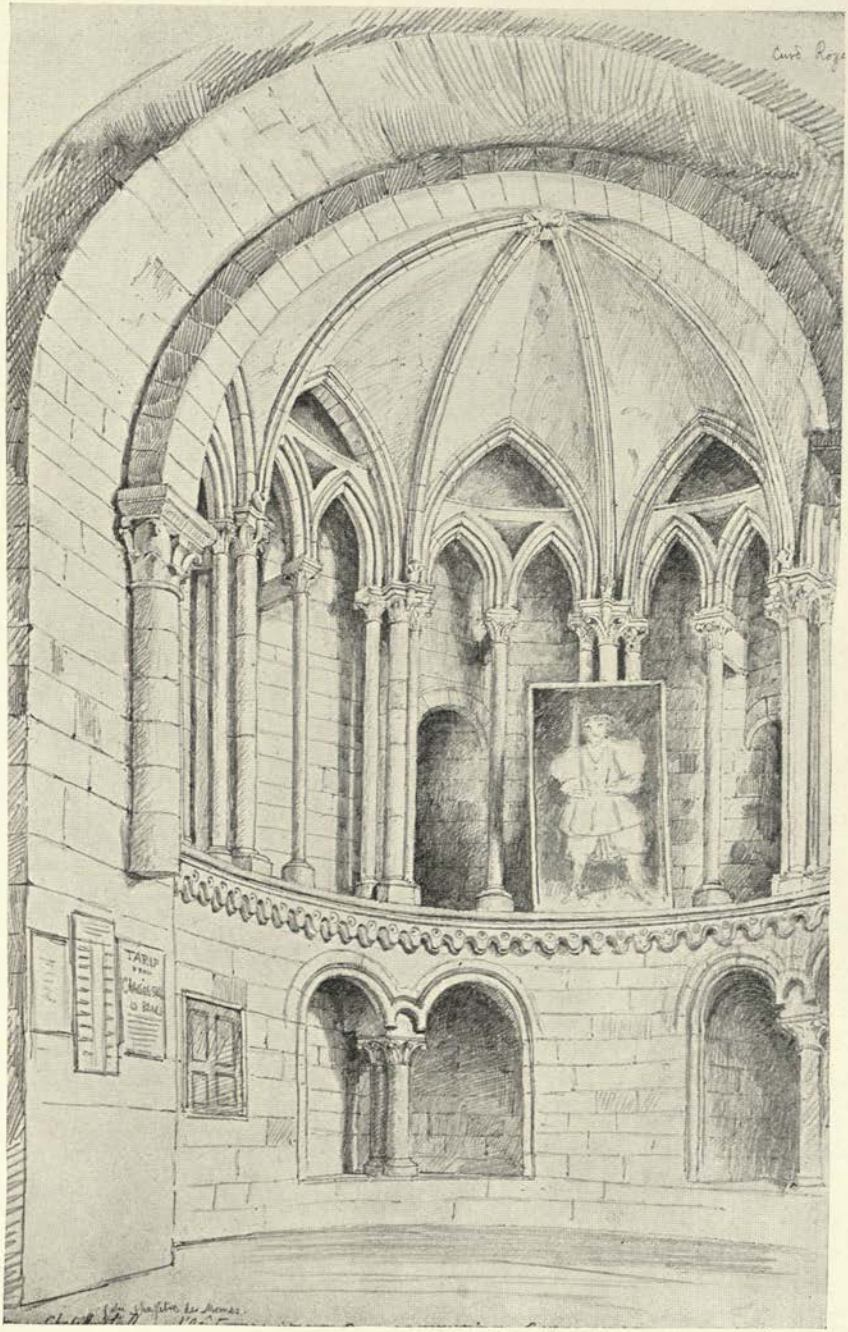
The choir is more thoroughly French in style, with a glazed triforium and gablets inside over the main arcade[1], something like those over the choir triforium at Amiens.

There is another church at Seez with a simple and pretty English-looking tower and spire.

Caen. Abbaye aux Hommes. The choir

The choir of the ABBAYE AUX HOMMES at Caen, which was rebuilt in the 13th century, has a vaulted triforium gallery something like that in the nave of Noyon, but with more elaborate mouldings, a clerestory of two lancets with a wall-passage and triple-arched inner tracery in the English fashion, and a round abacus to the vaulting shaft. There is a label moulding also over the arches, which is usual in English interiors but does not occur in the stricter French Gothic churches of the Ile de France. The carving is stiffer than the contemporary work in France. Fig. 59 shows the ornamented string-course

[1] Illustrated by Viollet-le-Duc, *Dict. Rais.* vol. IX. p. 296.



T. G. J. ABBAYE AUX HOMMES—CAEN—Sacristy

below the clerestory, and Fig. 60 some of the capitals. A side chapel with a 13th-century apse above a Romanesque

Caen. Abbaye aux Hommes

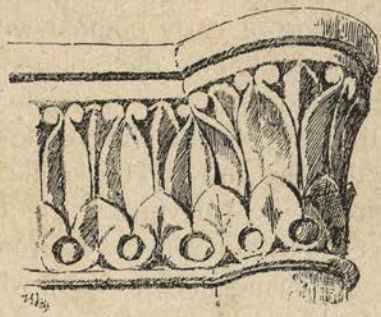


Fig. 59.

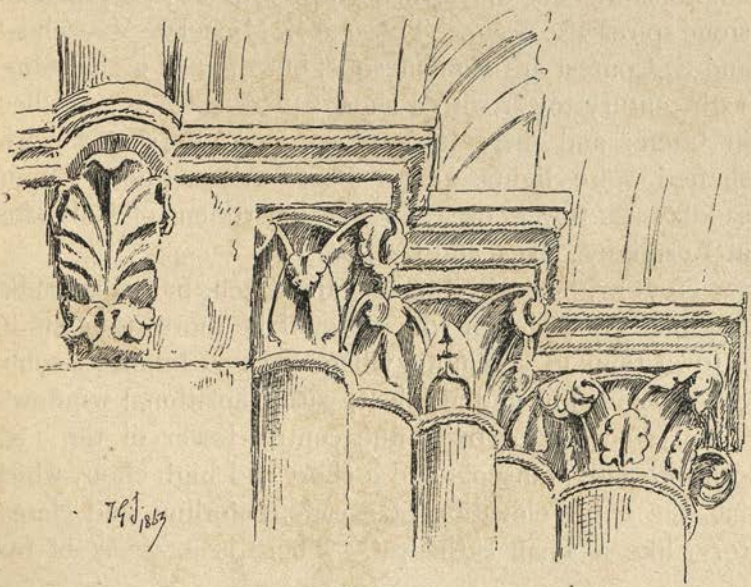


Fig. 60.

basement has some interesting details, unlike the work of the Ile de France (Plate XXXIX).

Norman village churches. Ifs

The neighbourhood of Caen abounds in charming village churches. The tower and spire of Ifs are magnificent; the lower stages are Romanesque, surmounted by a fine belfry stage of early pointed work that might almost be in England, but the spire, with its angle pinnacles and shafted lights, is distinctly French.

Saddle-back towers

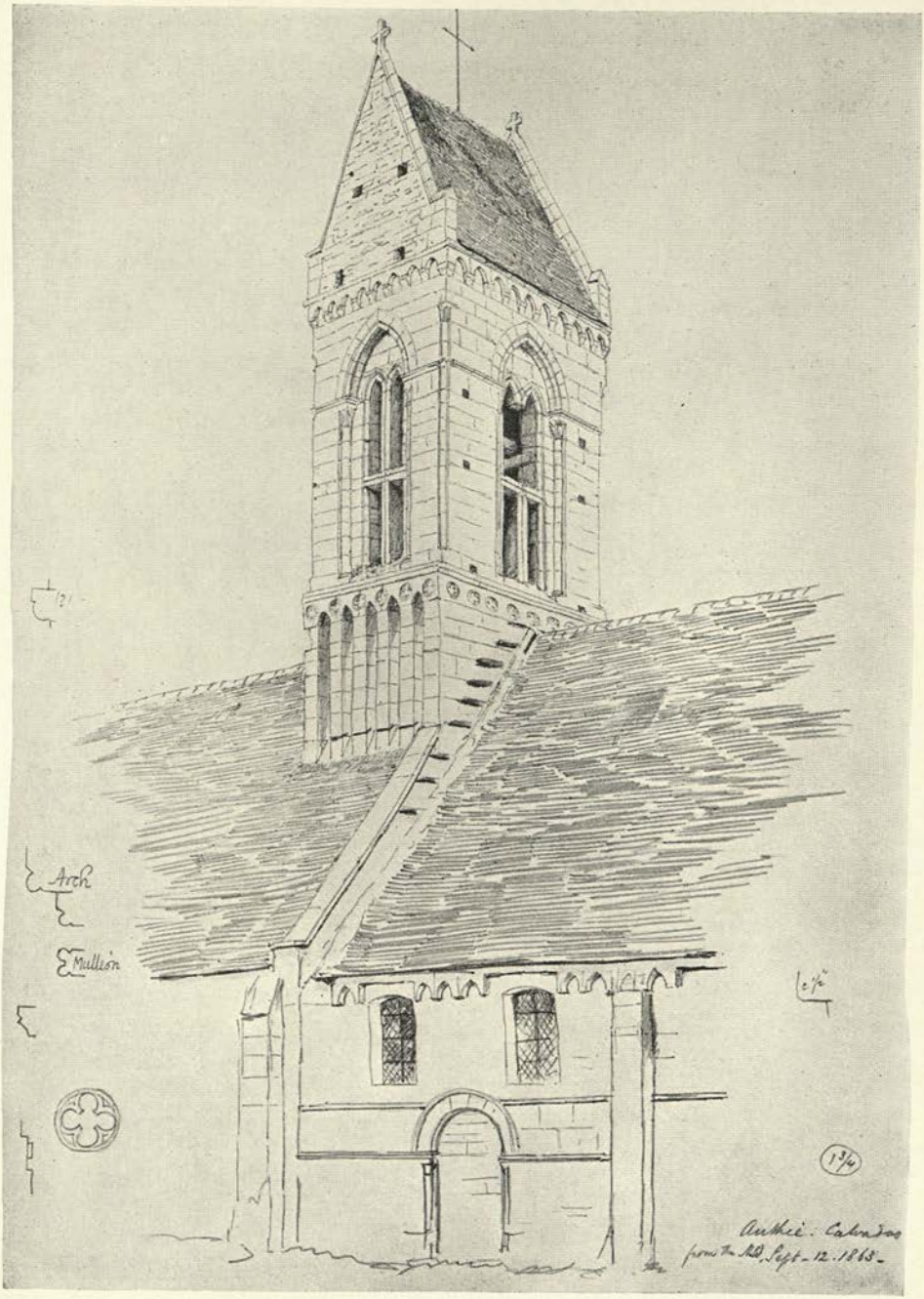
Many of the towers have a saddle-back roof: at S. André de Fontenay and at Herouville it is of wood with stone gables; at Louvigny it is of stone. At AUTHIE is a very pretty one in the centre of the church, between nave and chancel (Plate XL), which are in an earlier style. In England there is a saddle-back tower at Tinwell in Rutland, and another at Maidford in Northamptonshire, but the form is rare with us[1]. Pyramidal stone spires also occur. Those at S. Michel de Vaucelles[2] and S. Contest are Romanesque, but there is a charming 13th-century tower with a short square spire at S. Gilles in Caen; and there is another, more lofty and with shafted spire lights, at La Basse Allemagne. Other saddle-back towers occur in the department of Calvados at Formigny, Ryes, and Crepon.

Norrey

NORREY, between Bayeux and Caen, has a splendid fragment of a church which would be more at home in a town than in a remote village of two hundred souls. The nave is low and aisleless, with transitional windows. This is succeeded by a fine central tower of the 13th century with transepts and a short and high choir, which has the triple elevation of arcade, triforium, and clerestory, like a small cathedral. There is a *chevet* of five

[1] Mr Bond illustrates others at Ickford in Oxfordshire, Wadenhoe in Northamptonshire and Brentingby in Lincolnshire. *English Church Architecture*, vol. II.

[2] Illust. in my *Byzantine and Romanesque Architecture*, vol. II. Plate CXXVIII.


Arch
Mullion
Authie. Calvados
from the N.E. Sept. 12. 1863.

bays with pointed arches on coupled columns with side shafts like Fig. 54, except that here all four are detached. The capitals are mostly *à crochet.* Attached to the ambulatory are two apsidal chapels, each surmounted by a tall semi-octagonal spire with a strange and rather grotesque effect. There is a rich late geometrical porch at the north transept, sadly dilapidated, and a four-light geometrical window in the south transept. Norrey

All the mouldings are deeply undercut, like 13th century English work, but not so well profiled. There is a good deal of carving running round the ambulatory

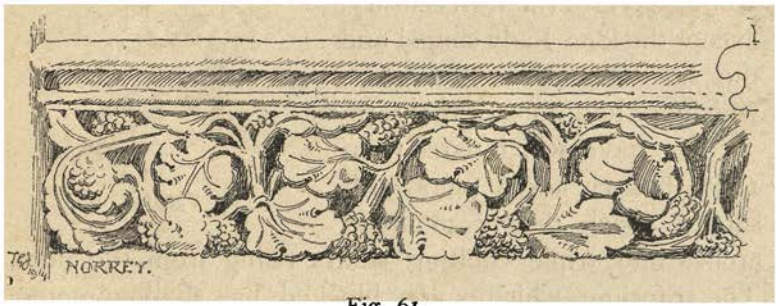


Fig. 61.

wall below the windows; it is in high relief, and undercut, and is rather heavy, and has the look of being stuck on (Fig. 61). The foliage is half-way between the older conventions and the natural work of the 14th century. One part of this band of ornament is occupied by a series representing the Massacre of the Innocents, which belonged to the older church of which the nave is a survival.

In the wall arcading of the ambulatory it is interesting to find the interlacing mouldings which play so large a part at Wells (Fig. 62 and Plate LXI *infra*). Interlacing mouldings

The abaci of the apse columns are round, and so are those of the spire lights.

Coutances cathedral

The magnificent cathedral of COUTANCES (Plate XLI) shows most of the peculiarities of Norman Gothic. Nothing remains to be seen of the older church, built between 1030 and 1083, though the core of the four huge piers of the central tower and that of many of the walls is probably of that construction, encased in later work. The whole church is now in the pointed style of the 13th century, except the long Lady chapel and the side chapels of the nave, which are additions of the 14th.

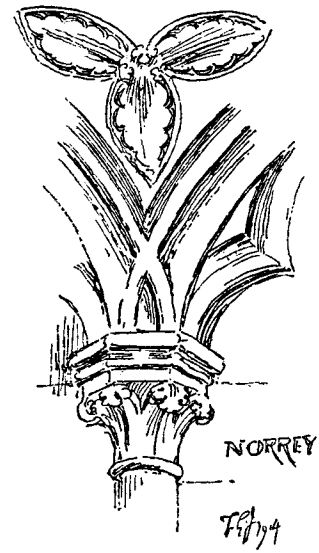


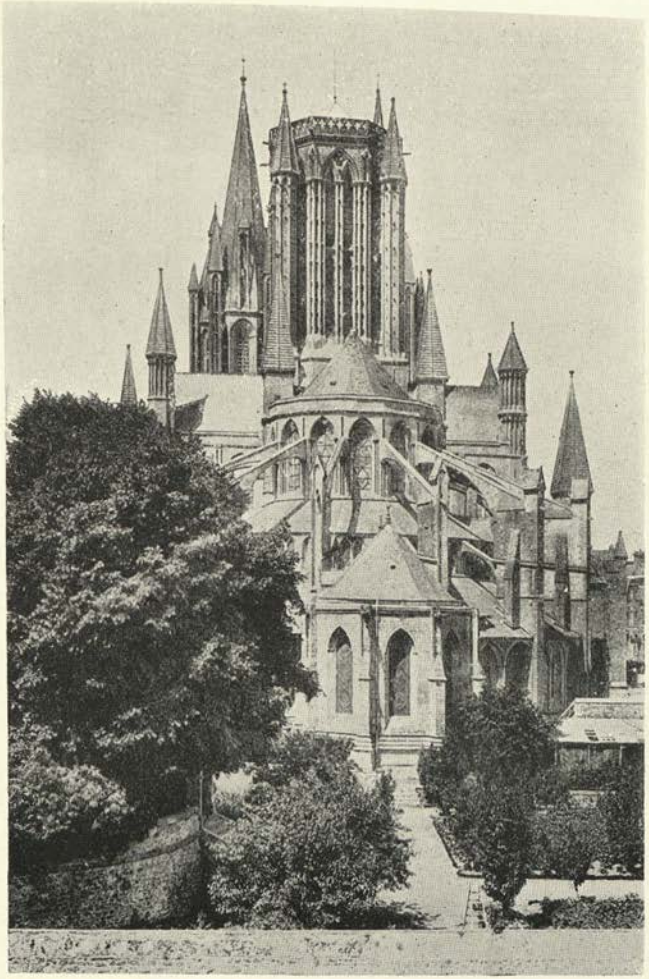
Fig. 62.

The nave

The nave, which dates from 1208, has clustered piers with square abaci, deeply moulded arches and triple vaulting shafts rising from the floor. The triforium, which is now blocked, has shallow mouldings, a rather coarse parapet of large quatrefoils, and a circle in the shield of the head sunk with geometrical patterns. The clerestory consists of a plain single light with a wide soffit and jamb on the inside, cut square through the wall, allowing a wall-passage in front of the window. The nave has a single aisle on each side, with later chapels beyond between the buttresses, and the party walls which form the buttresses are pierced with traceried openings.

The choir

The eastern part of the church dates from between 1238 and 1248. The choir has three straight bays with clustered piers, and a clerestory with double tracery like that of the nave at Bayeux (Fig. 55 *sup.*). The apse of



COUTANCES CATHEDRAL—East end

COUTANCES CATHEDRAL—The Choir aisle

seven cants rests on coupled shafts standing farther apart than those at Sens, in order to carry a very thick wall. This is prepared for in the clustered pier also, which is arranged in two groups corresponding to the two columns (Fig. 63). A double aisle with radiating chapels surrounds the choir and *chevet*, divided by an arcade on cylindrical columns with a round abacus. The inner of the two aisles has the triple arrangement of arcade, triforium represented by a blank arcade, and clerestory, and this causes the main arcade to be very lofty. The effect of this is not good in the choir, the arcade being

Coutances cathedral

The choir aisle

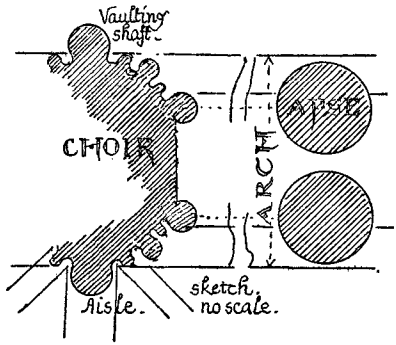


Fig. 63.

very high, and the pairs of detached columns unduly pulled out. The choir has no triforium, but a balustraded passage below and in front of the clerestory windows. On the whole the interior of Coutances is disappointing, the best part being the inner aisle of the choir with its cylindrical columns (Plate XLII).

In this part of the church all the abaci are round, while in the nave they are square. The vaults are quadripartite with a longitudinal ridge rib. There is no ridge rib in the nave. All the mouldings in arches and piers are very deeply cut.

Coutances cathedral. The outside east end

The outside of the *chevet* is very pleasing, and the buttresses, which, as at Notre Dame at Paris, go in one flight over both aisles, are effective. There is a curious device in roofing the radiating chapels. In the French *chevet* the chapels had each its own roof, polygonal as at Amiens, or round as at Noyon, according as the chapel was round or polygonal. These often rose up into pyramidal roofs (*v.* p. 73 *sup.*, Plate VII). But the Norman plan at Coutances, the Abbaye aux Hommes at Caen, S. Lô, and Bayeux was to bring the eaves to a straight line, or a curved line if the apse were semicircular,

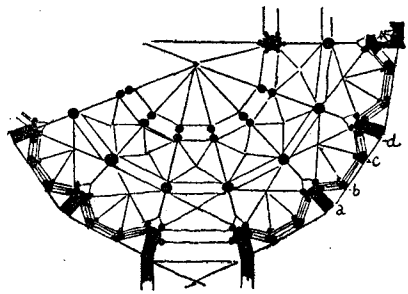
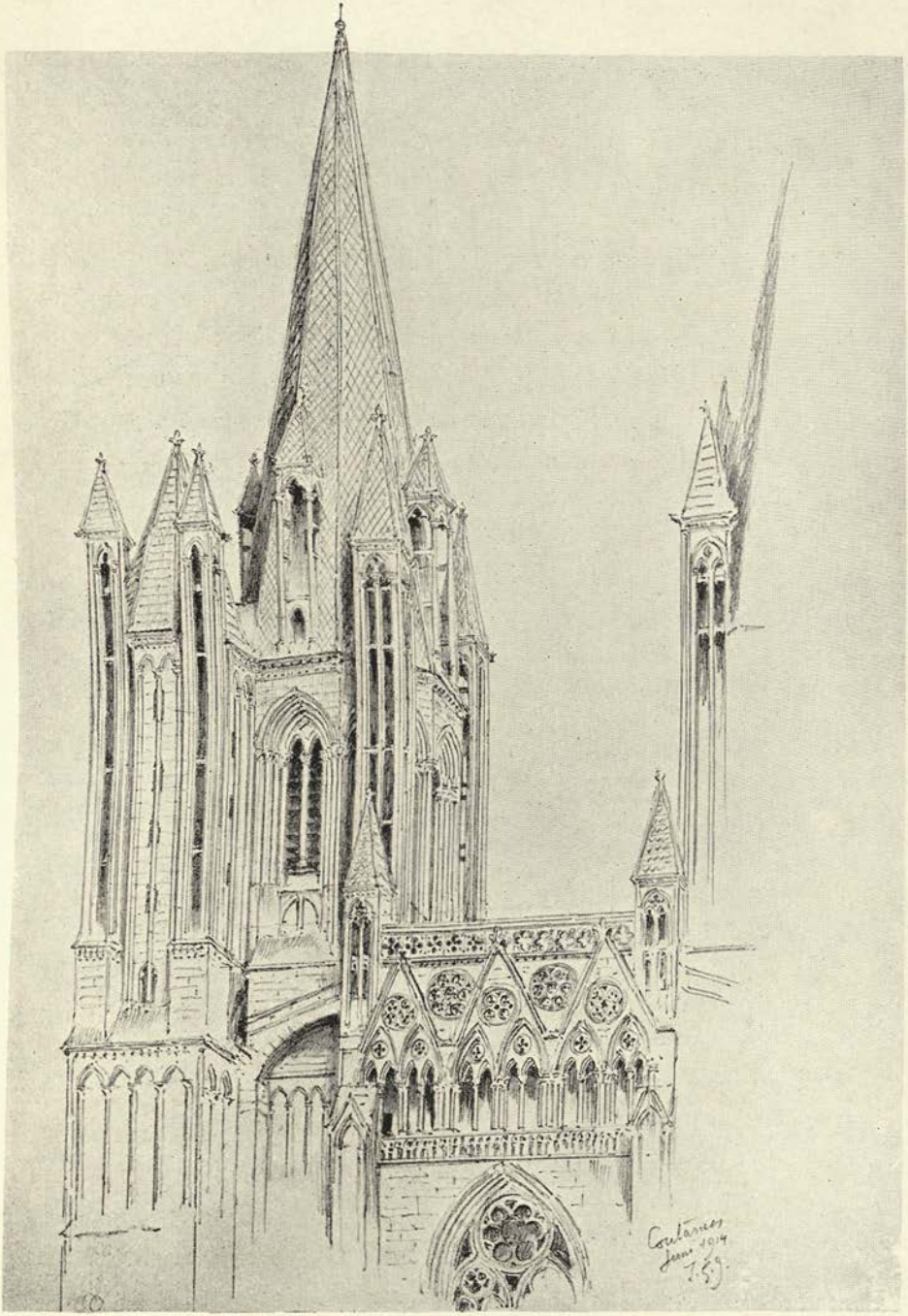


Fig. 64.

from buttress to buttress, as shown in Fig. 64, by turning an arch from *a*—*b* and from *c*—*d*, with a small vault behind it covering the triangular recess. This enabled the aisle to be covered by a simple lean-to roof.

The three towers

The glory of Coutances, however, is its three great towers, two at the west end with spires, and one over the crossing which sadly wants a spire too. The two western towers have each a square base, changing to an octagon above the nave roof, and with a stair-turret standing clear at the outside front angle of the main tower and only joining it angle to angle (Plate XLIII). This smaller tower also changes from square to octagon



T. G. J. COUTANCES CATHEDRAL

and finishes with a spire. The triangles left on the square by the departure of the octagon are filled, both in the main tower and in the stair-turret, by enormously long hollow tabernacles pierced and shafted and crowned by spirelets. The whole effect is very rich, but rather confused, especially when seen on the diagonal, when the outline is awkward and the effect is not successful. Coutances cathedral

A beautiful gallery of tracery, dating from 1371 to 1386, joins the two towers, masking the gable of the nave roof.

The central tower is open to the crossing as a lantern, the octagon being formed by corbelling out, and not by squinches. This seems the usual Norman method. It is open for two stages; the lower has a passage behind a screen of columns and arches, the upper a balustraded gallery in front of the windows,—two large lancets in each bay,—and above is a vault of sixteen converging ribs. The interior effect of this is admirable. The lantern

Both nave and transepts have mullioned windows in their façades,—Norman fashion,—instead of the French rose.

CHAPTER IX

THE PROVINCIAL STYLES, *continued*

BURGUNDY, TOULOUSE, ANJOU

Tournus

HERE and there in different parts of France eccentricities occur in the construction of the vaults which are always interesting. Perhaps the most curious is that at TOURNUS in Burgundy, where the difficulty of combining a large clerestory window with a barrel vault is met by placing a barrel vault transversely over each bay at right angles to the axis of the church, springing it from arches thrown across the church from side to side. The long section of the vault therefore looks like the elevation of a bridge with several arches. The result is not beautiful, and the plan does not seem to have been followed elsewhere on a large scale.

Mantes cathedral

At the cathedral of MANTES however,—*Mantes la jolie*,—a somewhat similar method is adopted with better result on a small scale in vaulting the triforium. This belongs to the class of large triforium galleries like those at Noyon, Senlis, Laon, and Paris. It is vaulted with a series of barrel vaults placed like those at Tournus at right angles to the axis, and springing from lintels across the gallery supported by a row of colonnettes (Fig. 65). As the gallery rounds the apse these cross vaults radiate

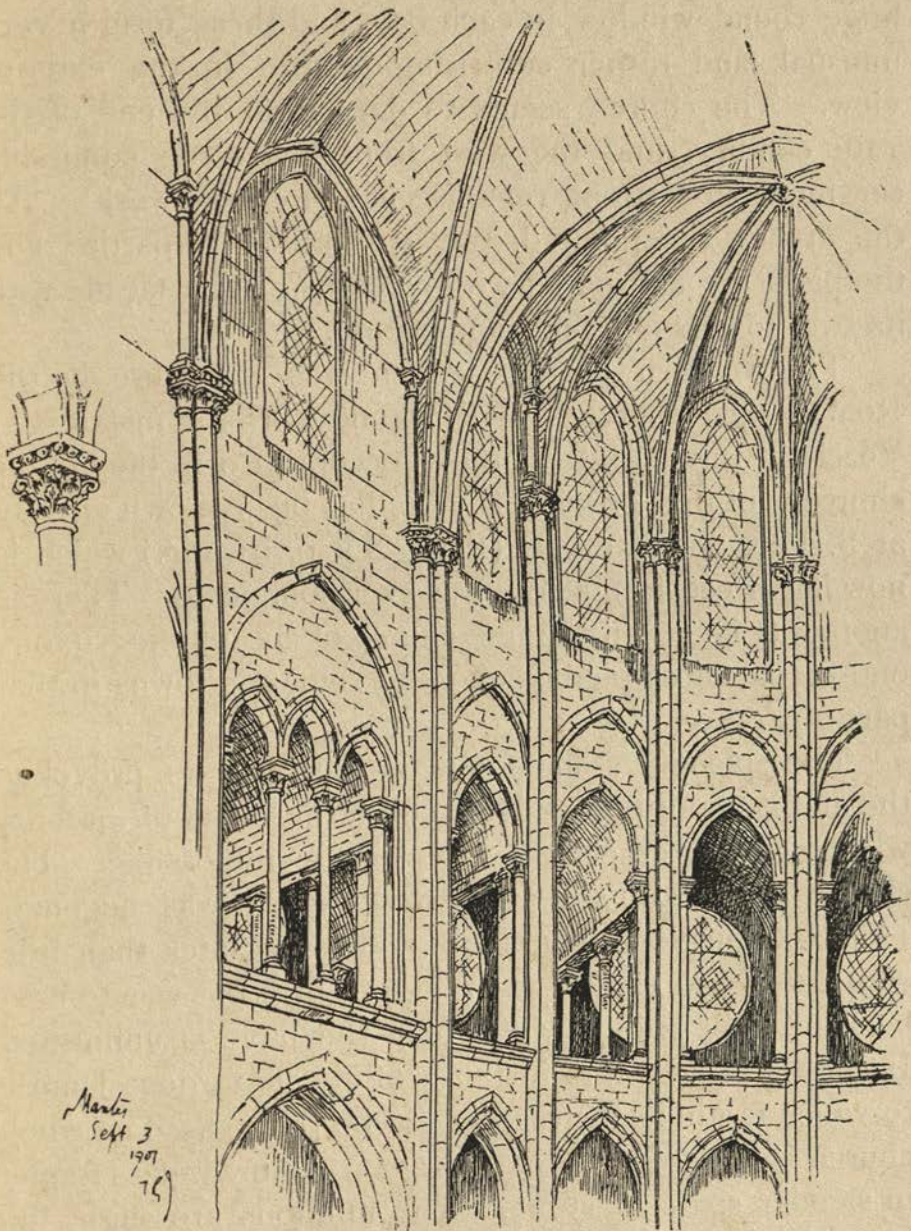


Fig. 65.

Mantes cathedral

conically from the narrow span of the choir bay to the greater span on the aisle wall; this gives room for a huge round window in each bay, and these form a very unusual, and rather surprising feature in the exterior view. The church seems to date from the end of the 12th century, and the west front has some admirable carving with a strong reminiscence of classic work[1]. All the arches are pointed, the vaulting is sexpartite, and the piers are alternated with columns. The façade with its twin towers is a fine composition.

The Burgundian narthex

The western narthex which was a feature in the Romanesque churches of Burgundy, as for instance at Vézelay, Autun, and Pontigny, occurs also in the Gothic churches of that province. One has been shown already at S. Père sous Vézelay (Plate XV p. 91 *sup.*) which is now imperfect, if indeed it was ever completed. There is another (Fig. 66) in the fine church of SEMUR-EN-AUXOIS, one of the most picturesque and romantic towns in that part of France.

Champagne

The splendid stone found in Champagne provoked the architects of that province to daring feats of masonry which would otherwise have been impossible. The

S. Urbain at Troyes

church of S. URBAIN at TROYES which was begun in 1262 and finished about 1276, and looks later than it is, consists of the choir and transepts of what was to have been a larger building, of which the nave is unfinished. It affords an extreme instance of the hazardous lengths to which Gothic construction can be pushed. The whole church is a mere lantern of gorgeous stained glass framed in slender spars of stone. The mullions are slight like bars of iron, the piers are mere shafts, and as the floor of the triforium is only twelve or fourteen feet from the

[1] Illustrated in my *Byz. and Rom. Architecture*, vol. II. p. 264.

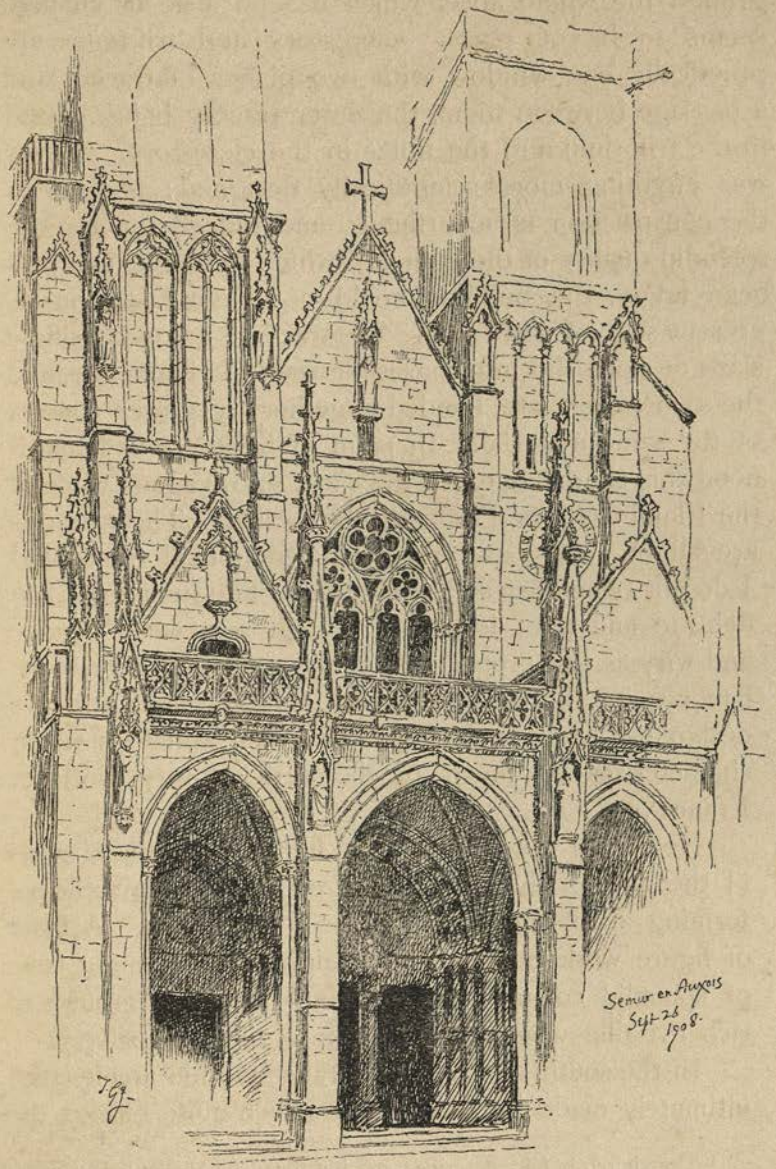


Fig. 66.

S. Urbain at Troyes

ground the whole apse, which has no aisle or chapels, seems to be of glass. Clerestory and triforium are practically one window with two planes of tracery and a passage between them, the outer tracery being glazed in the triforium and the inner in the clerestory. Never was anything more scientifically designed: nothing in the construction is superfluous, and indeed but for the splendid quality of the stone, of which full advantage has been taken, the building could not have lasted in its present state of perfection. The traceries are cut in single slabs of stone slid into chases between the buttresses, and the two planes are bonded together by gutter courses of the same material. In point of lightness and hardihood this church outdoes the most extravagant work of the Flamboyant or Perpendicular period. The traceries are all of severe and vigorous geometrical forms and I do not remember an ogee curve. The mouldings are delicate and pure in detail, though somewhat slender and wiry as the proportions of the mullions and tracery bar require, but still sufficient and effective, and the design has escaped that monotony and tameness which characterizes so much of the 14th century work in France[1].

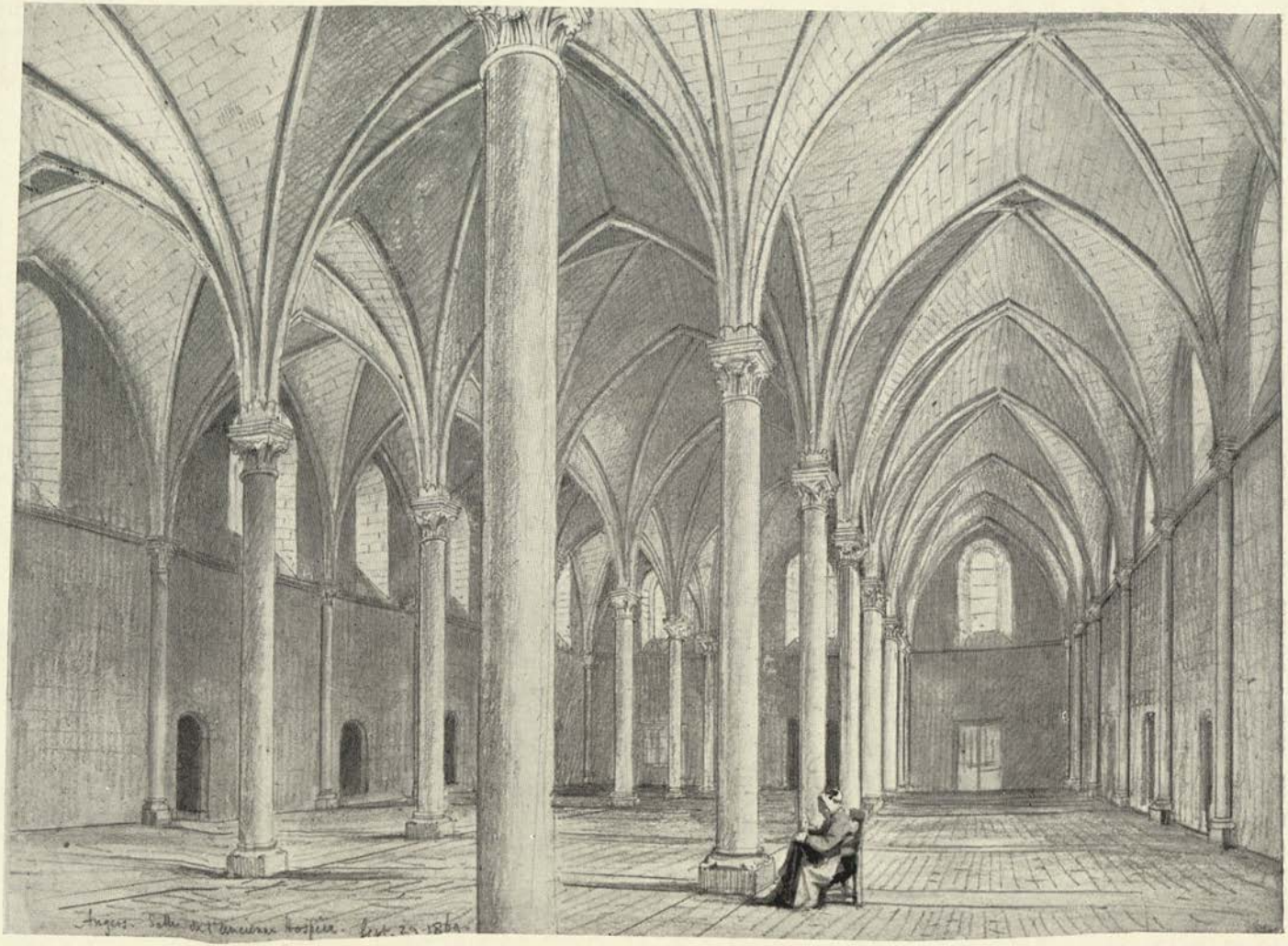
The glass

Nearly all the windows are filled with painted glass of the date of the church, and on a consistent scheme, forming an harmonious system of decoration. A band of figure work bounded by straight lines forms a zone of splendid colour round the building on a ground of rich grisaille which sparkles like a tissue of silver.

Gothic in southern France

In the south and west of France Gothic architecture ultimately made its way, but it never quite effaced the

[1] The church is fully described and illustrated by Viollet-le-Duc in his article on Construction. *Dict. Rais.* vol. IV.



T. G. J.

HÔTEL DIEU—ANGERS

traditional Romanesque of those parts, which yielded slowly and reluctantly to the new-comer. The Gothic cathedrals of Clermont and Limoges seem out of place, and have an air of intrusion among the far more interesting buildings of the Romanesque period of which that part of France is full. In Poitou and Anjou pointed architecture took a peculiar form very unlike that of the royal domain, and retained many features of the preceding Romanesque style. The cathedral at ANGERS, though it has regular rib and panel vaulting is not very far

The Plantagenet style

Angers cathedral

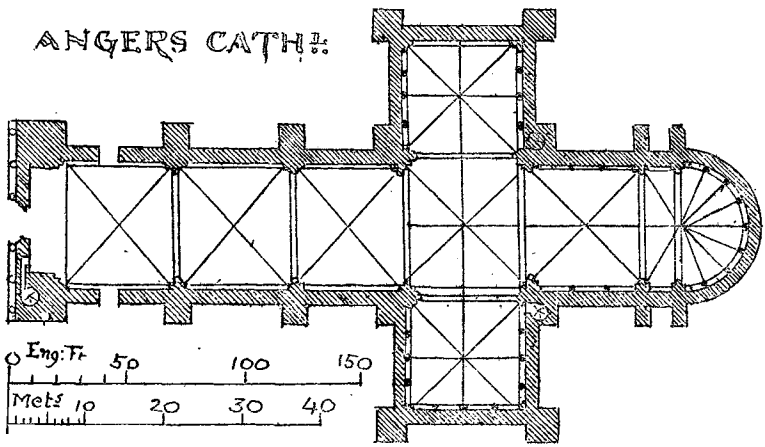


Fig. 67. De Verneilh.

removed from the construction of the domed churches at Angoulême and Fontevrault. Its continuous nave and choir, without aisles or chapels (Fig. 67), covered by vast quadripartite vaults which rise enormously, dome-fashion, in each bay, is obviously inspired by the neighbouring churches, which have real cupolas on pendentives.

This Angevin, or Plantagenet style, as De Verneilh calls it, pervades the district, and Angers has many

Angers. Hôtel Dieu

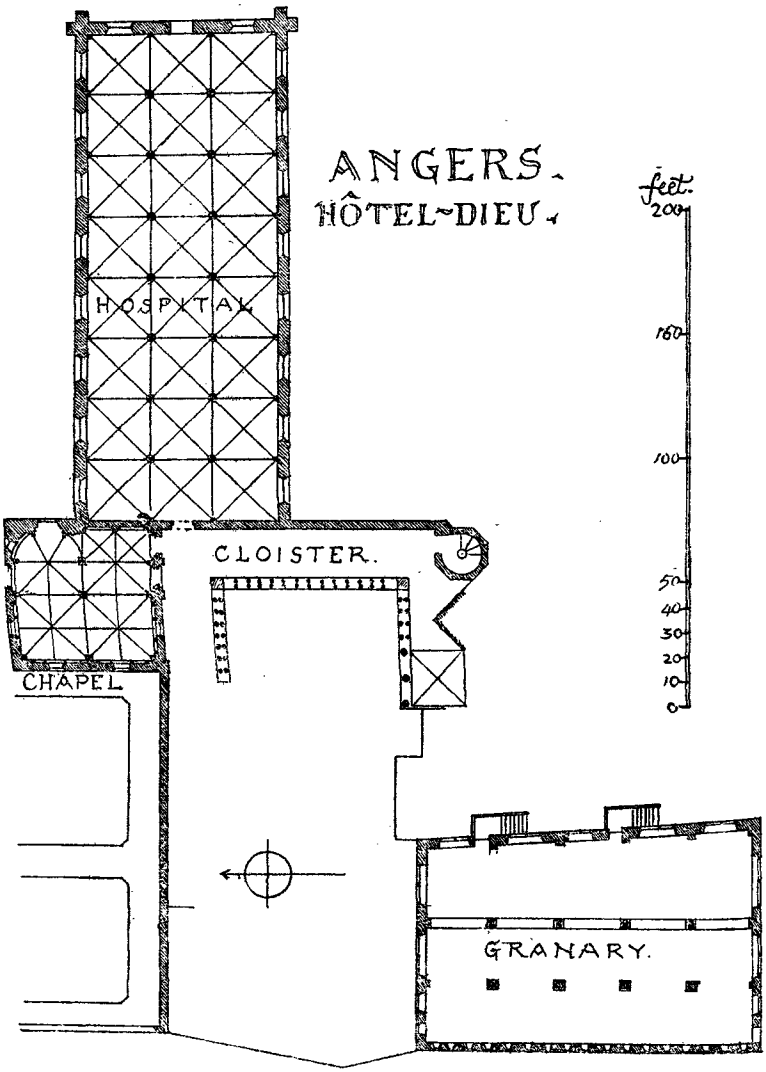

ANGERS.
HÔTEL-DIEU.
feet.
200
160
100
50
40
30
20
10
0
HOSPITAL
CLOISTER.
CHAPEL
GRANARY.

Fig. 68.

examples of it. The ancient HÔTEL DIEU, founded in 1153 by our King Henry II, is a magnificent structure consisting of a vast three aisled hall measuring about 200 × 75 feet, at the end of which is a beautiful chapel, with a Romanesque cloister, and a splendid granary in two storeys, not the least interesting member of the group (Fig. 68). Angers. Hôtel Dieu

The great hall (Plate XLIV), where the patients were lodged, was occupied according to its original purpose till a modern hospital was built some 50 or 60 years ago. It is divided by two rows of slender pillars with simple capitals, carrying vaults of pointed arches, highly domical, with ribs consisting of only a small roll like those at the cathedral. Half columns form the wall-responds, and at the springing, 18′ 5″ above the floor, a simple string runs round the room, above which in each bay is a round-arched single-light window. The chapel

The chapel adjoining at one end is a little later—Viollet-le-Duc dates it about 1180. It is a square building, divided by a central column into four square bays with a shallow apse in one of them, the eastern bays being again subdivided with an extra column. The columns, capitals, and responds are like those in the hall, but are surmounted by a plain block from which springs the groining, much domed up and with the same simple roll for a rib as those in the great hall. These ribs are very slight, and owing to the very great doming of the vaults are not really necessary to the construction. In fact they are not really developed at all as independent ribs, but are embedded in the vault, merely marking the lines of the groin by a roll moulding (Fig. 69).

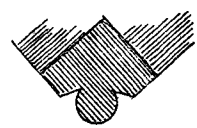


Fig. 69.

Angers. Hôtel Dieu

The windows are round-headed, between round-headed blank panels, forming a triplet in each bay, reminding one slightly of the fenestration of the Temple church in London.

The granary

The granary or storehouse (Fig. 70) is in two storeys. The lower is a vaulted crypt hewn partly out of the rock;

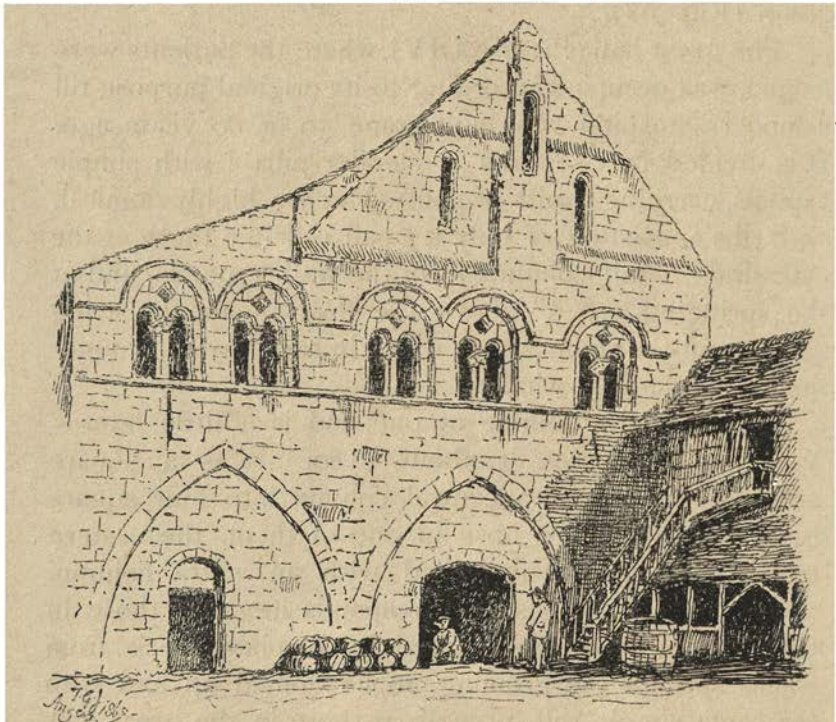
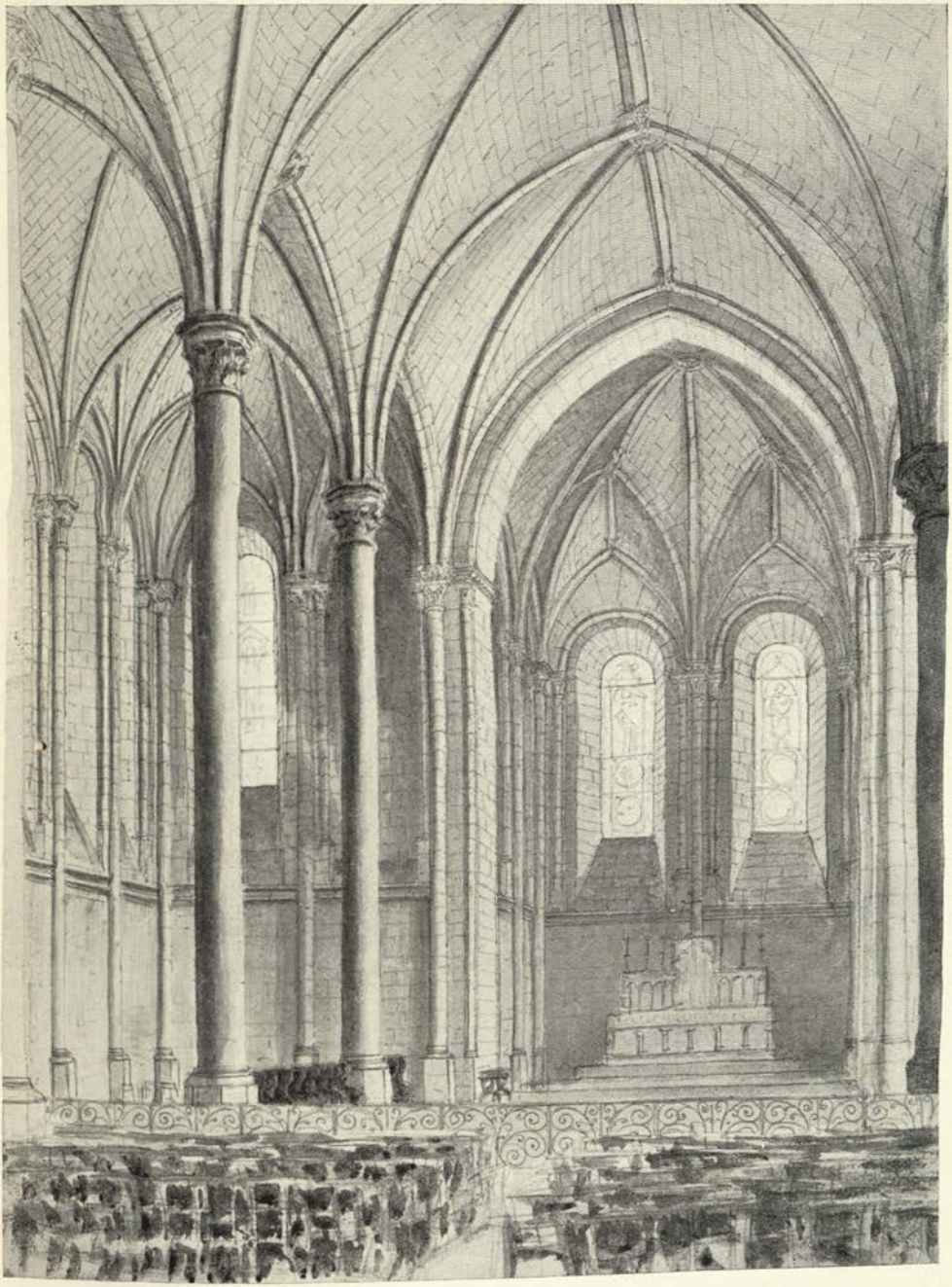


Fig. 70.

the upper is magnificent with two rows of columns dividing it into three aisles, and roofs of open timber framed with curved rafters. One of the arcades has coupled columns bearing a common impost through the thickness of the wall.

Angers. S. Serge

In the same Plantagenet style is the fine abbey church



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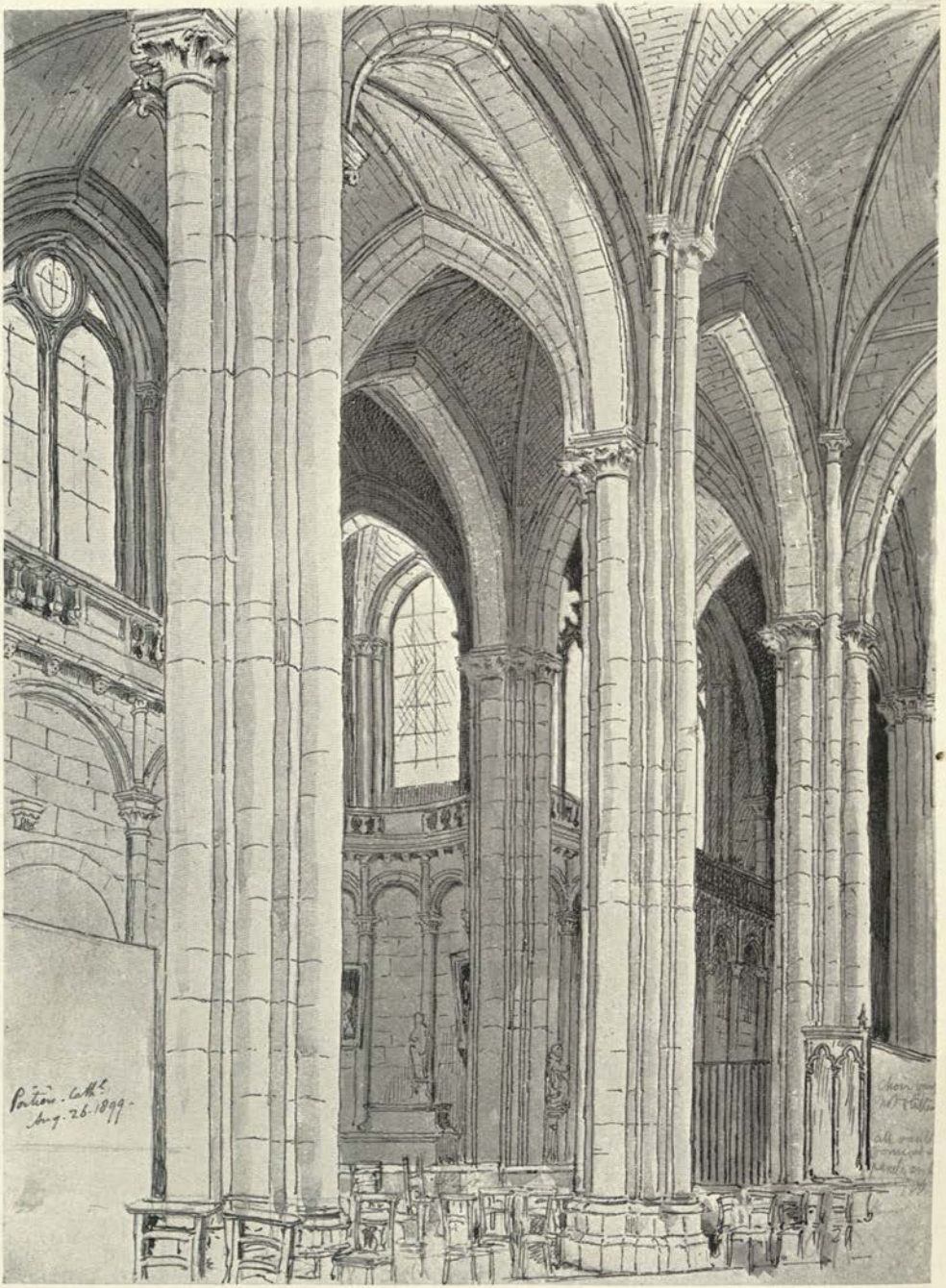
S. SERGE—ANGERS



T. G. J. POITIERS CATHEDRAL

of S. SERGE (Plate XLV), perhaps the most beautiful example of it. The choir has three aisles of equal height and nearly equal width, four bays long: the middle aisle is projected one bay beyond, and ends square. The columns are slender like those in the Hôtel Dieu, and have octagonal capitals. The vaults are domed up and have the usual roll by way of rib, though here again it is not really a rib at all but a moulding worked on the arris of the stones that form the edge of the groin. Here, and also at the chapel of the Hôtel Dieu, the roll occurs also along the ridge, like the ridge ribs common in England, but in the end bays, which are subdivided into lesser vaults, the doming of the vault makes this ridge rib mount like an ordinary groining rib. Angers. S. Serge

It is to be observed that though all the vaulting arches are pointed, the windows here, like those at the Hospital, are round-arched with a simple splay round them.

The cathedral at POITIERS (Fig. 71), which was founded about 1160 and is contemporary with that of Angers, is another building in the Plantagenet style (Plate XLVI). Like S. Serge it has three aisles of equal width, and nearly equal height, the middle one being a little higher than the two others, piers slender and lofty, domed-up vaults with a slight roll for a rib, and ridge rolls like the other examples that have been described. The east end is square and the church is wider at the west end than at the east. The west end with its two towers is later and not so interesting. Poitiers cathedral

Round the walls runs a lofty arcade with round arches on slender shafts carrying a gallery or passage which passes in front of the windows, and through the piers that divide the bays. The cathedral at Angers has a

Poitiers cathedral

similar arcade with a gallery, but the arches are pointed. This is a purely Romanesque feature and may be seen in the domed churches of Solignac and Cahors. The construction of these aisleless churches,—for Poitiers

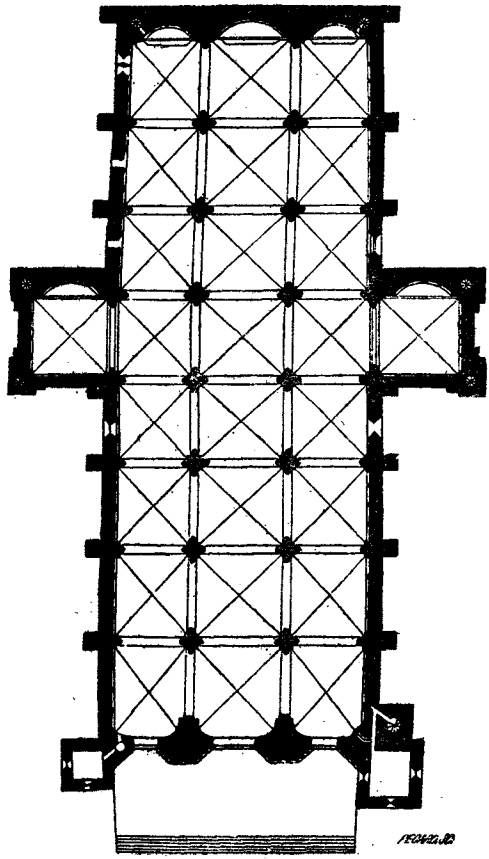
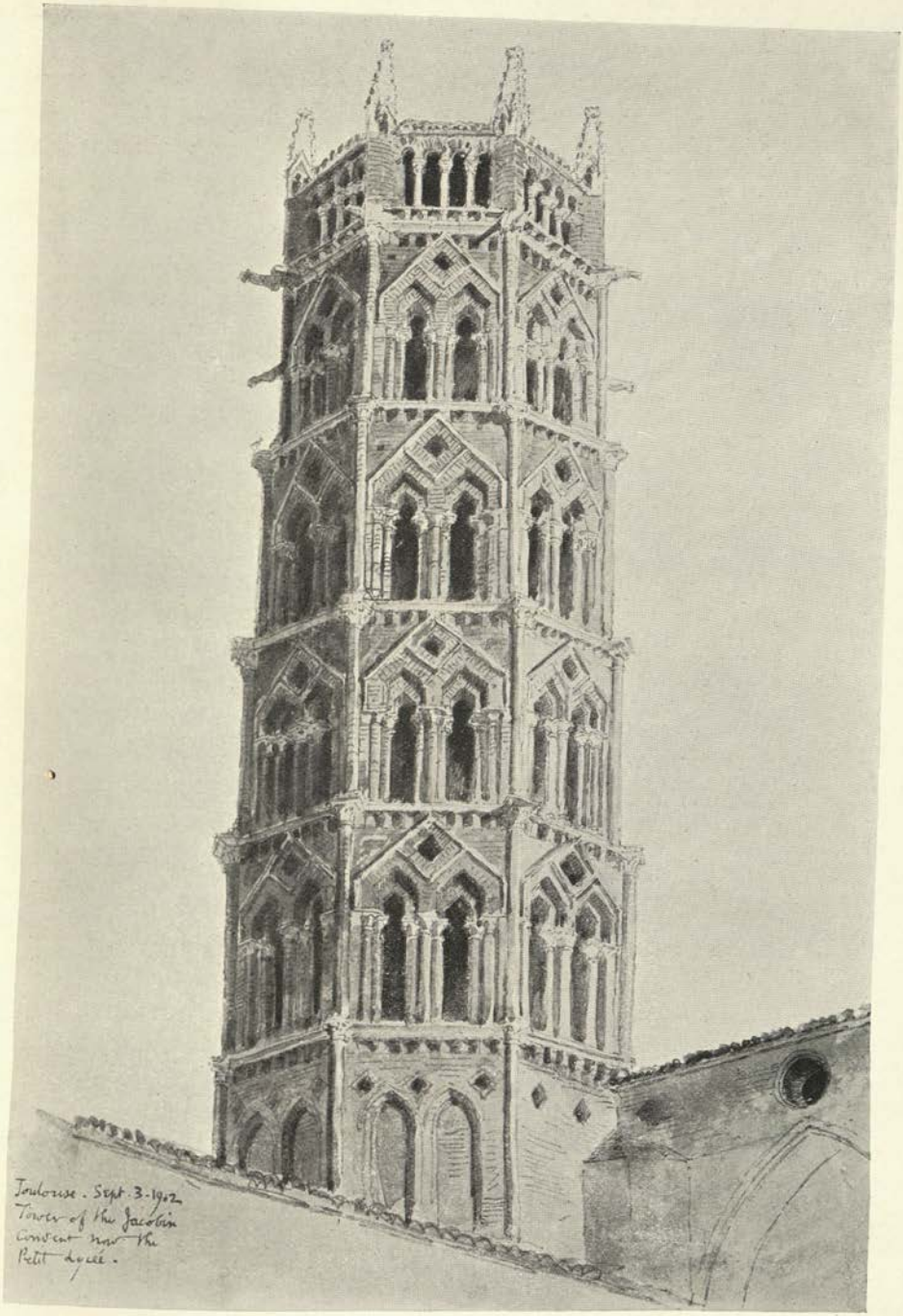


Fig. 71. Viollet-le-Duc.

is really a church not of nave and aisles, but of three naves,—depends a great deal on these interior buttresses, and though at Angers there are considerable buttresses outside, Cahors and Fontevrault have only shallow outside



T. G. J.

TOULOUSE

T. G. J.

S. LEONARD

projections and deep piers inside between which the lower part of the wall is brought out and carries the gallery that I have described. Poitiers cathedral

The great hall of the old palace of the Counts of Poitou, now the Palais de Justice, at Poitiers has arcading round the upper part of the walls like that at the cathedral, in which the windows are pierced. Poitiers. Palais de Justice

The Angevin style of Gothic peculiar to the domains of the Plantagenet kings of England, has a strong individual character, and very little relation to the Gothic work which we have been describing in the central and eastern parts of the country, where the royal power was supreme. It is a style of great beauty and well deserves study. It has an extraordinary delicacy and refinement considering its early date, and looks much later than it really is. The Plantagenet style

In the neighbourhood of Toulouse little or no stone is to be found, and during the middle ages brick was the usual building material. It was used with nice discernment of its properties as distinct from those of masonry. The tower of the Jacobin convent at TOULOUSE dating from the end of the 13th century (Plate XLVII) is a typical example. The architect has avoided the trouble of getting moulded bricks as much as possible, and has economised stone to the utmost. The only masonry consists in the capitals and string-courses. The shafts at the corners of the octagon and elsewhere are of shaped bricks, but for the window heads ordinary plain bricks are ingeniously made to serve by means of straight-sided arches instead of curved. The effect is excellent and gives the tower a character of its own. The stages diminish as they rise, the outline leaves nothing to be desired, and the design is altogether delightful. There does not seem ever to have been a spire on this tower, Toulouse. Jacobin tower

Toulouse

but Viollet-le-Duc says there are others of the same sort which have short spires of brick. We shall come to brick spires later in Italy. There is another tower in Toulouse at the Augustine convent, now the museum, very like that of the Jacobins, but it is imperfect and the lower stage differs.

In the district of the Limousin are some fine towers with a peculiar arrangement of octagonal stages superimposed on a square substructure. An early example is

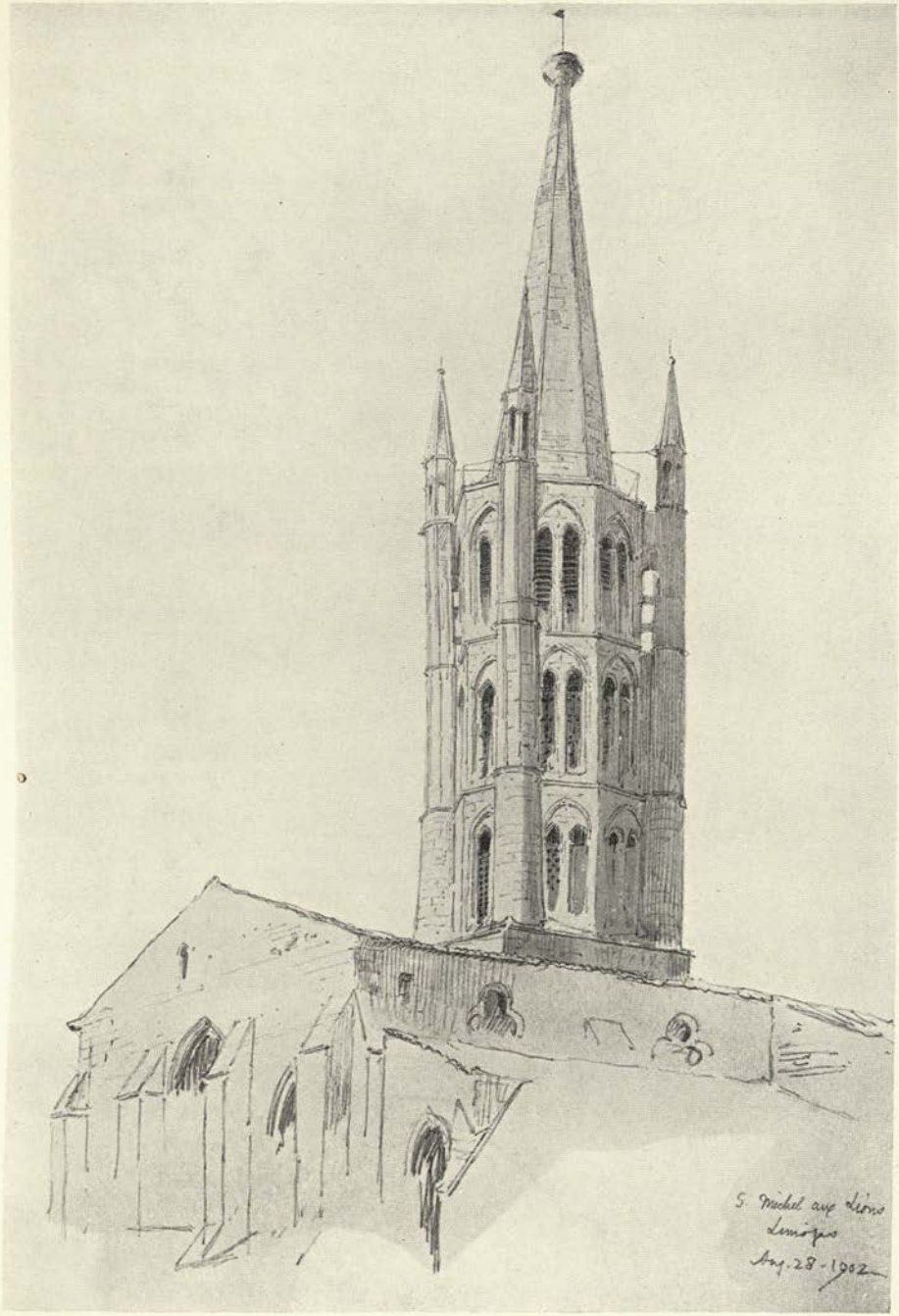
Tower of S. Leonard

afforded by the imposing steeple of S. LEONARD, between Limoges and Clermont. The two lower storeys are square, with two arches in the side, and the lower stage, which is open and serves as a porch, has a central column from which vaults spring to the outer walls (Plate XLVIII). The third and fourth stages are also square, and are a good deal set back from the face of those below. The fourth storey has on each face a window with a steep gable over it like those in the steeples of Chartres, Vendôme, and some early towers in Aquitaine, at Brantôme and elsewhere. The upper part is octagonal in two receding stages, but the peculiarity is that the octagon is not set with sides parallel to the square below but obliquely, so that an angle comes in the middle of each face of the square, and at each corner of it. The general outline is not very satisfactory, nor are the stages very well proportioned to one another.

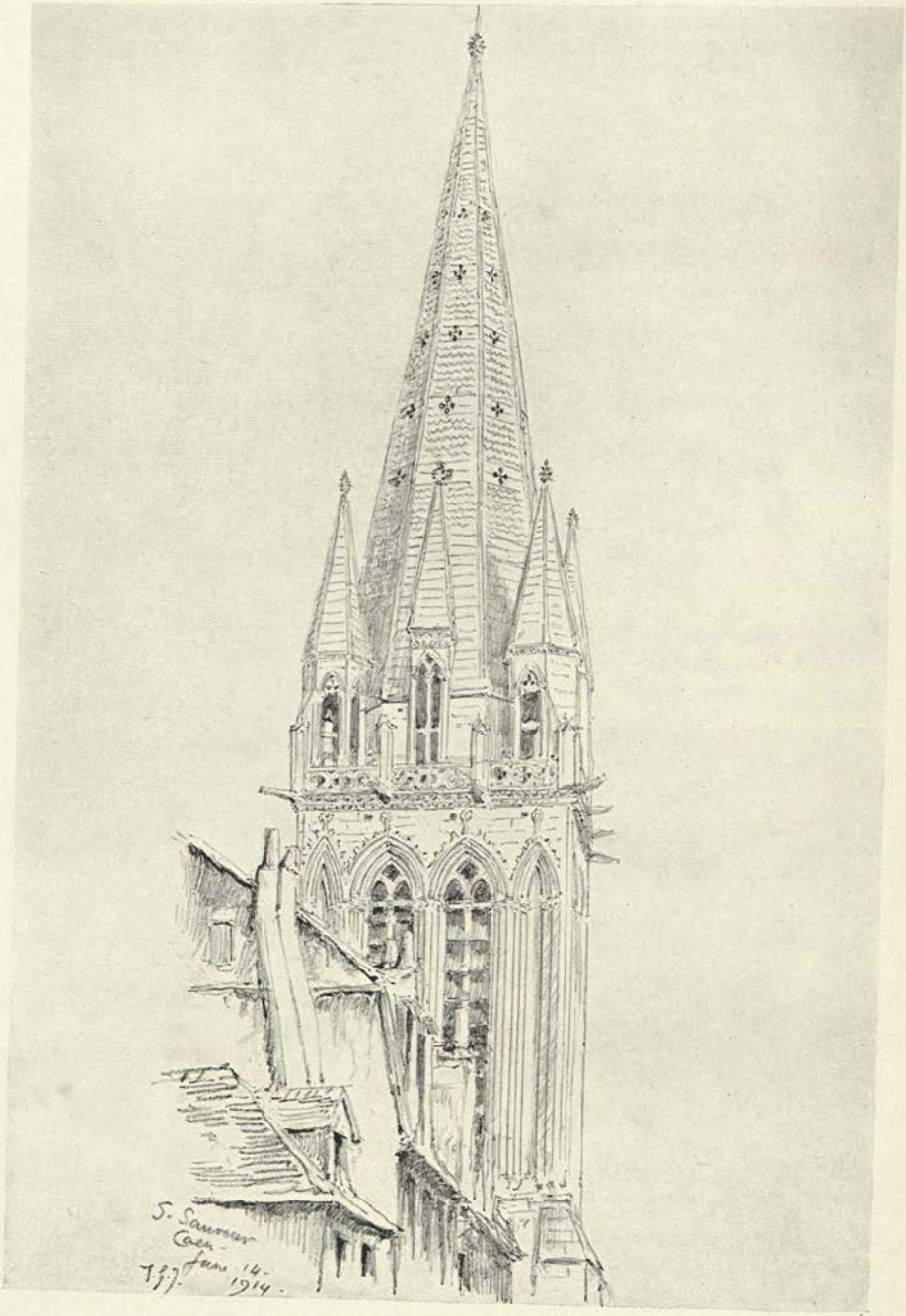
There are three steeples in LIMOGES with the octagon set obliquely in the same way, obviously a local fashion.

Limoges. S. Michel

They have however the addition of an octagonal or round pier over each angle of the square. Two of them, that of S. MICHEL AUX LIONS (Plate XLIX) and that of S. Pierre have spires: that of the cathedral, built from



T. G. J. S. MICHEL AUX LIONS—LIMOGES



T. G. J.

CAEN—S. SAUVEUR

the ground inside an older square structure, either never received its spire, or has lost it.

The French spire

It was in England and in Normandy that the Gothic spire attained the greatest excellence. In France the solid sturdy spires of the transitional period are very satisfactory, but those of the 13th century, as for instance that above described at Senlis (*v. sup.* p. 68, Plate III), though admirable in detail leave a good deal to be desired in outline.

The Norman spire

The Normans had a surer eye for mass and profile and their spires of the late 13th and 14th centuries are admirable. Two beautiful 13th century spires surmount the Conqueror's towers at S. Etienne, Caen, with admirably grouped pinnacles and spire lights[1]. In this case the towers are of an earlier date than the spires, but in the steeple of S. Pierre in the same city we have a complete design from the ground upwards. It was built in 1308, and is perhaps the finest example of a type which runs through that part of Normandy.

Caen. S. Pierre

Caen. S. Sauveur

S. SAUVEUR at CAEN has a tower and spire very like that of S. Pierre, but not so lofty (Plate L). The tower of S. Jean, was to have been like it, but the foundations having given way, the tower settled some feet out of the upright, and the spire was not attempted. The towers of Audrieu, Norrey, Ifs, and Bernières, are all, so far as they were completed, of the same type.

The Norman belfry

In all of them there is a very lofty belfry stage with a pair of two-light windows on each face between a pair of narrow blank arches. An enriched cornice defines the division between tower and spire, which is often indefinite in the earlier examples.

The spire and pinnacles

The spire is octagonal with a lofty spire-light on each direct face, and a pinnacle, square or octagonal, hollow

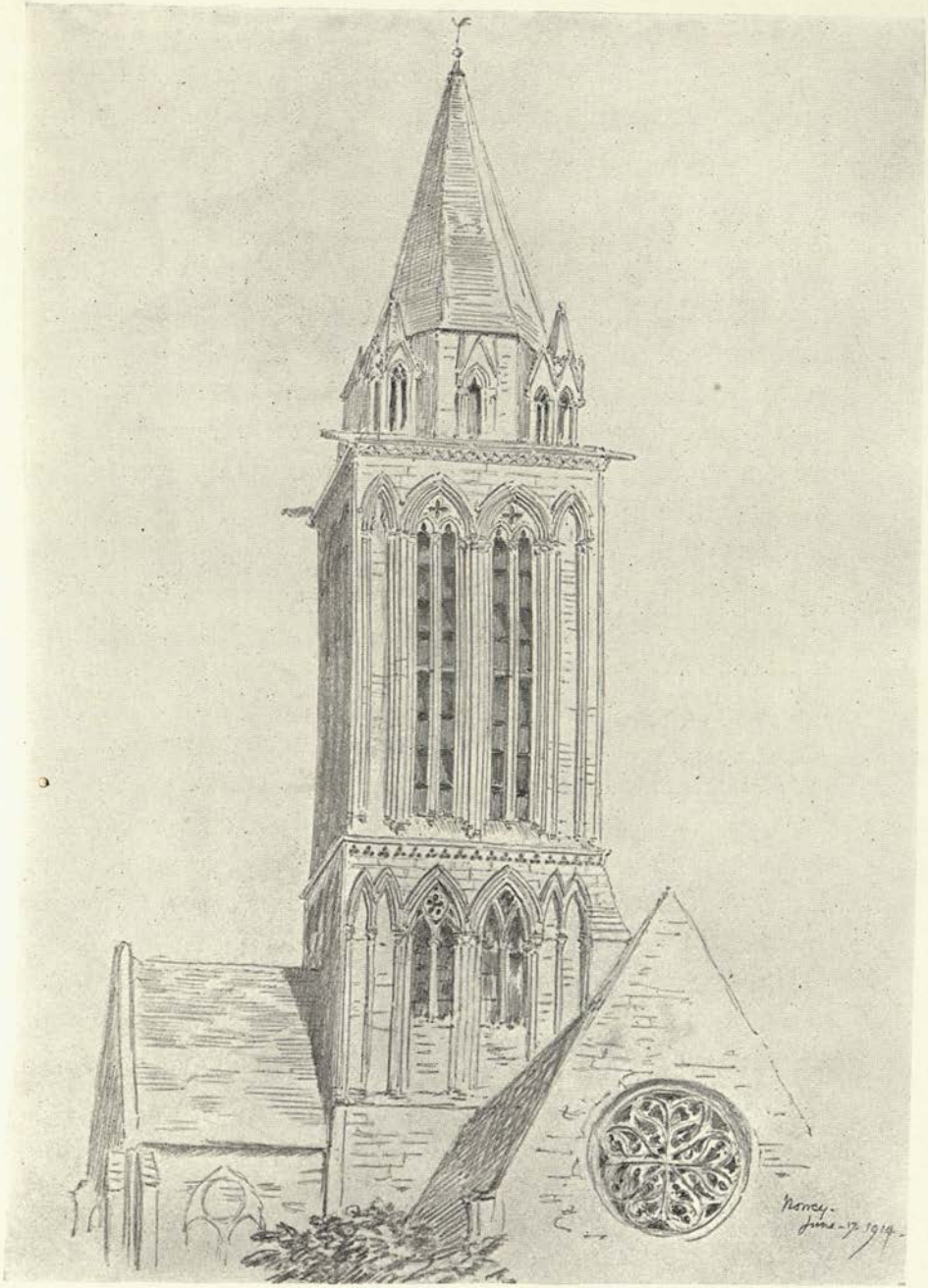
[1] Illustrated in my *Byzantine and Romanesque Architecture* (Plate CXXVII).

and shafted, on the angles of the square, sometimes standing on a broach, sometimes without. The three at Caen have a parapet with small outer pinnacles, and they are perhaps a little later than the others. That at NORREY (Plate LI) is imperfect but room seems to have been left there for a similar parapet. The upper part of the spire was destroyed by lightning and is completed in wood and slated. The neighbouring church of Bretteville l'Orgueilleuse has a fine modern belfry and spire of the same type on a Norman base. I do not know whether there were any traces of an old one of the kind which gave the design for it. In the steeple at Norrey all the capitals have a round abacus.

Spire at Norrey

Further west in Normandy at Coutances and S. Lô we get a different type: the octagon begins lower down below the belfry stage, and the angles are filled with enormously long hollow and shafted pinnacles or tabernacles, each of which has its spirelet (*v. sup.* Plate XLIII). Both types have their different methods, but to an English eye, perhaps prejudiced, that of the Caen district, more like our own, seems to make the better composition and to give the finer outline.

The spires of western Normandy



T. G. J. NORREY

CHAPTER X

LATER FRENCH GEOMETRICAL GOTHIC

At Beauvais the reduction of solid support is pushed to an extreme. The choir is a mere lantern of glass set in a frame of stone. The triforium is pierced with glazed windows in the back wall and is in fact a continuation of the clerestory, and the vaulting shafts that run from floor to roof unite all three storeys into a single composition. The transparency of the whole is completed by the large windows of the aisle clerestory and those in the chapels which are seen through the main arches.

Gothic development complete

With Beauvais the history of the development of Gothic architecture in France is complete. We have traced its progress from a simple and tentative beginning at S. Denis and Senlis to Noyon and Sens, where Romanesque tradition was almost lost, and to Paris and Chartres where it is quite neglected. At Reims the whole system of Gothic construction is understood, and carried out in its entirety, but without weakness. At Amiens the whole theory of construction was displayed, and pursued to its logical results with full assurance and not a little temerity. At Beauvais it was pushed further still; and if Amiens reached the margin of safety, Beauvais rashly overstepped it. The system could be carried no

further, and French Gothic in the 14th century, unless where affected by provincial differences, followed the lead of the 13th without its life and progress, declining in originality, and growing more and more attenuated and feeble, till the Flamboyant style appeared to give it fresh life and interest.

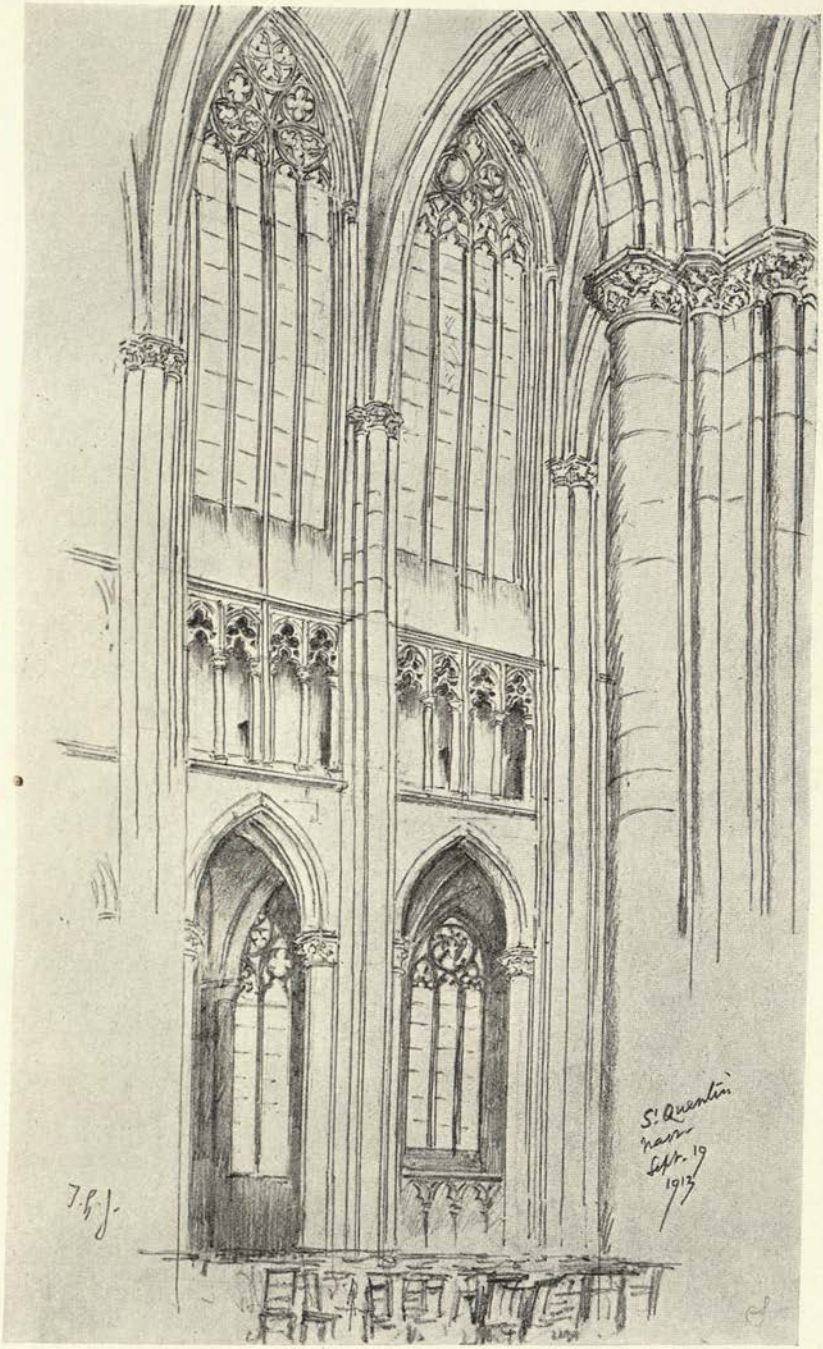
A very few examples of later French Geometrical Gothic must suffice.

S. Quentin

The vast church of S. QUENTIN, on the way from Paris to Brussels, with a vault 127 feet high, dates from the later half of the 13th century and is supposed, I do not know on what authority, to have been designed by Wilars de Honecort. It has two transepts, the only remaining instance of which I am aware in France, though there had been two at Cluny. The nave which is a good deal later, though still in the geometrical style[1] (Plate LII), is very striking, with a fine clerestory to which the triforium is united, as had now become the fashion, and a great effect of height is given by the vaulting shafts which rise from the floor. The capitals are poor, with detached sprigs of foliage planted round the bell. There is a single aisle to the nave, but the choir, which is dated in 1257, has two aisles divided by cylindrical columns with better foliage. The triforium of this part consists of four pointed arches on colonnettes as at Reims and Chartres. The eastern transept is at the end of the choir, and the apse starts directly from it. The *chevet* has chapels ranging with the outer aisle and opening by triple arches to the ambulatory.

There is no tower, though preparation was made for a pair at the west end, which has now a poor Renaissance

[1] Mr Porter (*op. cit.* II. 329) gives the date of the building of the nave from 1400 to 1470, but the design cannot be so late.



T. G. J. S. QUENTIN—Nave

front. The church has a good deal of fine painted glass in various parts.

Chartres. S. Pierre

The magnificent church of S. PIERRE at CHARTRES has a continuous nave and choir with side aisles, but no transept. It is of various dates. The lower part of the eastern half is of early Romanesque work with massive piers and cushion capitals, and the aisle has plain cross groining without diagonal ribs, but the arches are pointed. This construction goes round the apse, and as the constructors had not yet learned that the diagonal groins on a curved plan need not lie in one plane, they got into difficulties, and the intersection is not in the middle of the aisle, but falls towards the inside crown[1]. The apse columns, originally mono-cylindric, have later vaulting shafts added to them, and all the superstructure is of later date.

Next in order would seem to come the six western bays of the church, between which and the eastern part is a distinct break (Fig. 72). Here are pointed arches on clustered columns with vaulting shafts that rise from the capitals like those in the cathedral, and a triforium of four trifoliated arches on colonnettes. The clerestory has two enormously wide lights and a small circle in the head.

The eastern part which looks like 14th century work[2] has five straight bays before the apse, a triforium with double tracery pierced through the back wall and glazed, and a fine clerestory above. All the vaults are quadripartite, and that of the eastern part is raised above the other.

The beautiful glass with which the whole clerestory

[1] As to this problem see above, p. 47.

[2] It is said to have been finished in 1310.

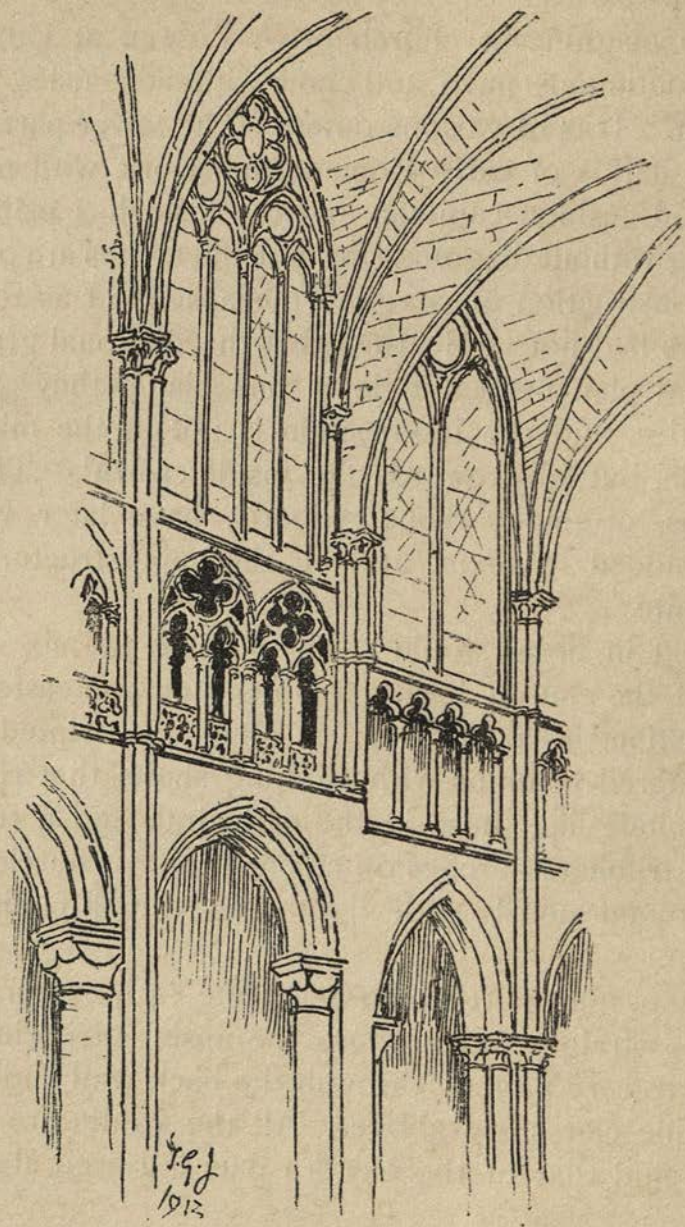


Fig. 72.

is filled has few rivals. In the western part the windows are glazed alternately with figure subjects, and with a mixture of figure and grisaille, two figures being placed in pale as an upright band of colour between spaces of grisaille. In the four-light windows of the eastern part the lights are alternately storied and in grisaille, which with an even number of lights has an odd effect. Chartres. S. Pierre

The late 13th century cathedral of CHÂLONS-SUR-MARNE has some remains of the older Romanesque church, and a magnificent interior; and the flank, having no chapels, has something of the grandeur of that at Reims. The apse has only three bays, so that the arches are much more open than usual, and the effect is good. The nave has cylindrical columns with octagonal capitals, but the foliage is poor. The triforium is glazed and united to the clerestory, which has four-light windows with a cusped circle in the head and two smaller circles with quatrefoils in the sub-order. The whole system of Gothic construction is logically carried out, and the interior of this church is very pleasing. Châlons-sur-Marne cathedral

It would be easy to multiply examples, did space permit, or if further illustration were necessary. The tendency was constantly to diminish the solids on the floor and increase the voids, and to return to simplicity of plan, of which the church of S. OUEN at ROUEN is a typical example (Plate LIII). The present building was begun in 1318 on the site of a Romanesque predecessor, of which a small fragment remains on the north side. It is on a magnificent scale, and shows in perfection the final type of a great French church. It has a nave with side aisles and no lateral chapels, and this has a good effect. The transepts are short and only outrun the aisle by one bay, and this also is good; and the apse Rouen. S. Ouen

Rouen. S. Ouen

with its ambulatory and chapels is planned with only three cants, which gives a very agreeable proportion. The whole plan, in short, is simple and excellent. The detail, on the contrary, is disappointing. The eastern part only is of the 14th century[1], and in the latest French geometrical style: the nave was added in the 15th century, and the west front is modern. There is a central tower, which, however, is not open as a lantern.

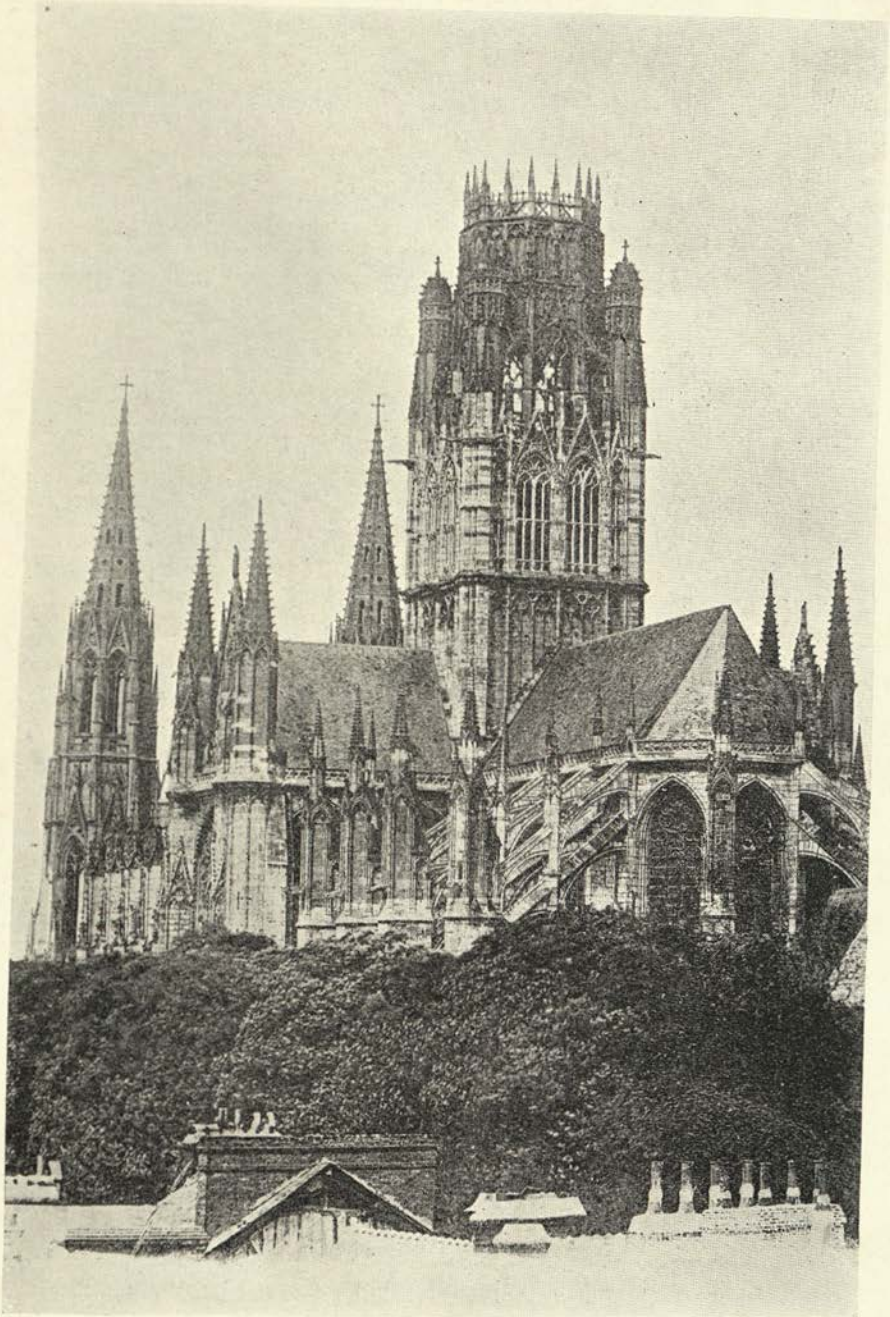
The whole construction is extremely slender. The choir has a clerestory of six-light windows combined with a square triforium bay, which has double tracery glazed on the outside. The vaulting shafts rise from the floor. The main arcade is starved and thin, and the shafts are meagre with poor little capitals. The aisle windows are enormous, and the supports generally are reduced to a minimum. All the vaults are quadripartite.

West of the transept all the windows are flamboyant, the nave dating from the 15th and 16th centuries, with reedy and thin mouldings, and the arcades have capitals only to the central shaft of the group, the other members being continuous with the mouldings of the arch.

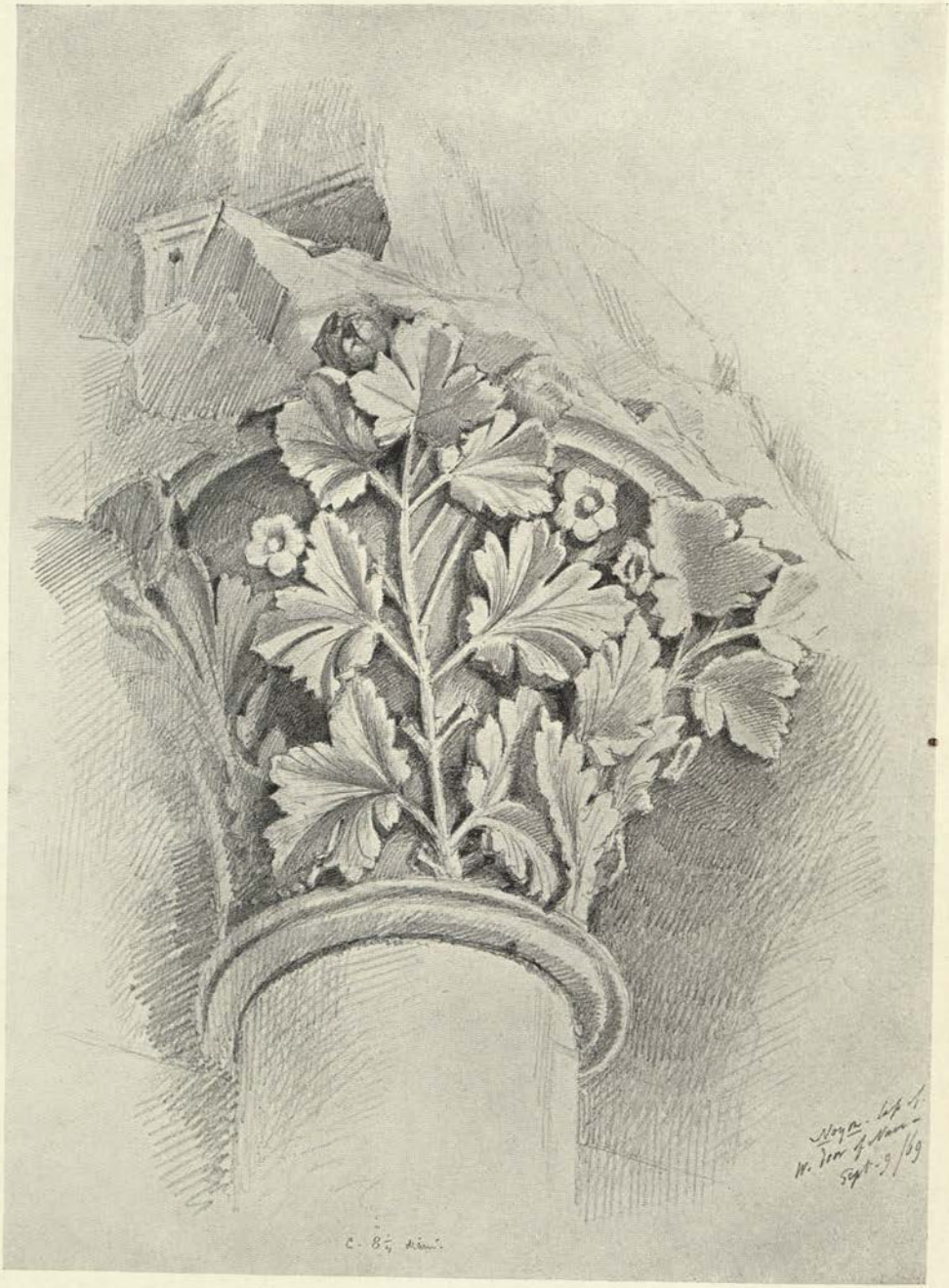
The general effect of the interior from the west end, owing to the simplicity of the plan and the excellence of the proportion, is fine; and as the arches are thin and the vaulting shafts a good deal projected, the effect of the nave is columnar, the arches being hardly seen. But beyond the general effect there is nothing to interest one, the details being poor and monotonous.

In sculpture during this period the tendency was

[1] The epitaph of the abbot who built it runs as follows: he died in 1339: Hic jacet frater Johannes Marcdargent alias Roussel quondam abbas istius monasterii qui incepit istam ecclesiam aedificare de novo, et fecit chorum et capellas et pilaria turris et magnam partem crucis monasterii antedicti. Dom. Pommeraye, cited Porter, II. 317.



ROUEN—S. OUEN



T. G. J.

NOYON

towards greater naturalism. Some of the capitals, breaking away from the convention of the *cap-à-crochet*, which continued almost to the last, are of remarkable beauty. Mention has already been made of the natural foliage in the chapter house of Noyon[1]. There are capitals in the western porch of the same cathedral, most of them sadly mutilated, as fine as anything ever done in that way. The rendering of the wild geranium (*G. pratense*) in that shown by Plate LIV can hardly be surpassed.

14th century sculpture in France

In figure sculpture there was the same tendency towards naturalism; and as this prevailed more and more the statues became less sympathetic with the architecture, and declined into portraiture. The magnificent figures at Reims seem to stand at the turning-point between two extremes; on one hand the stiff conventions of the Royal Portals at Chartres, where the figures are drilled into columnar forms, and are eminently architectural, and on the other hand the later statues, which are merely lodged in their niches as decorative features, and have no special relation to the architecture they decorate. But sculpture plays a far less important part during this period than in that preceding it.

The 14th century was not a happy time for France. Harassed by English invasions during the Hundred Years' War, ravaged by the Black Death in 1340 and afterwards, which is said to have swept off half the population, the French had other things to think of than the fine arts. Comparatively few great buildings were erected during that period, and the art showed little of the spirit that had produced the masterpieces of the preceding age. During the 14th century, says Viollet-le-Duc, "the architecture of religious buildings became

The 14th century in France

Character of later French geometrical Gothic

[1] *v. sup.* pp. 76, 77.

nearly uniform over all the territory subject to the royal power; the plans may, so to speak, be classified according to the dimension of the edifice, and they follow without notable differences the arrangement and mode of construction adopted at the end of the 13th century[1]."

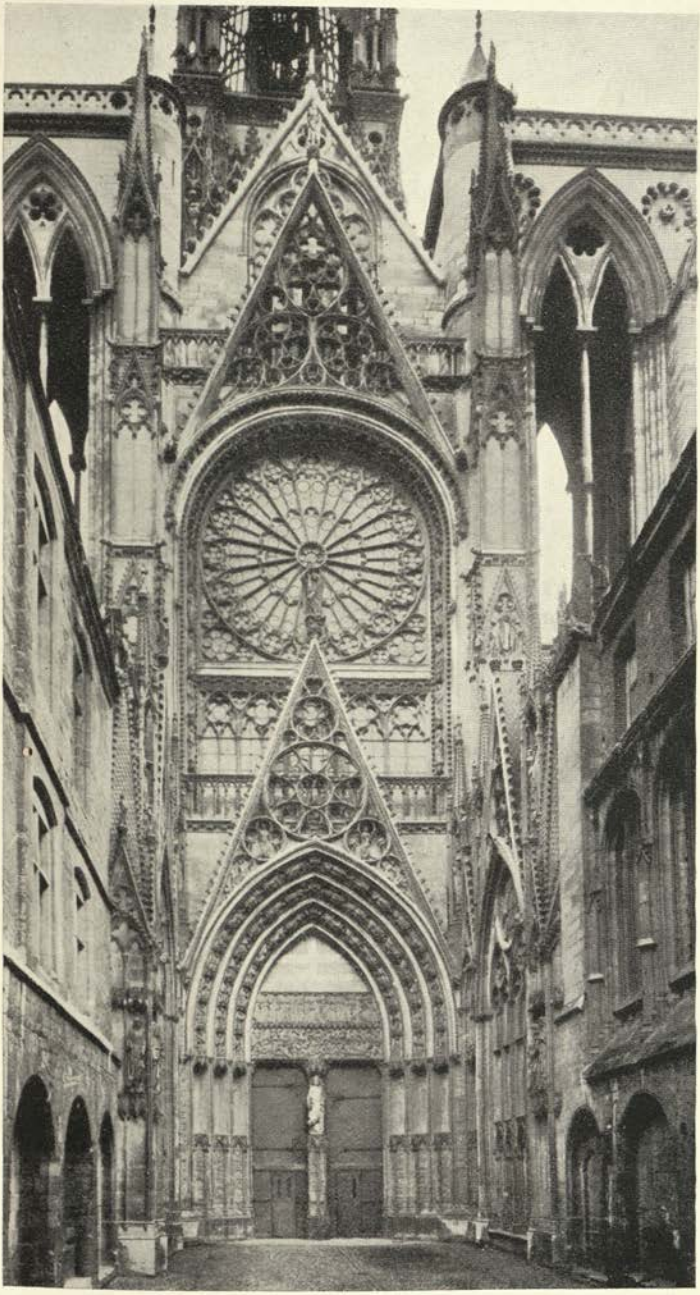
Bordeaux and Narbonne

I confess I find the later French Geometrical Gothic monotonous, and the great churches built during that period very much alike. Bordeaux has a fine Gothic cathedral with good sculpture, and at Narbonne is another dating from 1272 which Viollet-le-Duc praises for its admirable construction. It is on a grand scale, 131 feet high, simple in design, with no carving, and glazed mostly with grisaille. But he says the aspect is bare and cold, the work "plutôt d'un savant que d'artiste"[2]. This indeed is the character of the 14th-century Gothic generally in France, as it is well described by the same writer. He says "at the end of the 13th century we no longer find the individual stamp which marks each building at the beginning of it. The general arrangement, the construction, and the ornament take already a monotonous aspect, which favours mediocrity at the cost of genius. Science carries the day over art, and absorbs it. Solids are reduced to the least possible, windows enlarged to the greatest extent, spires rise on supports that seem incapable of carrying them, mouldings are divided into an infinity of members, and piers are composed of bundles of colonnettes as numerous as the arch mouldings they support. Sculpture loses its importance, starved by the geometrical combinations of the architecture. In spite of the excessive skill and logic which presides over the architecture, it leaves you cold in presence of its efforts, in which one finds more calculation

Monotony of 14th century Gothic in France

[1] *Dict. Rais.* vol. I. p. 239.

[2] *Ibid.* vol. II. p. 378.



ROUEN CATHEDRAL—Portail des Libraires

ROUEN CATHEDRAL—North Entrance Screen

than inspiration."[1] It was not till Gothic woke to fresh life in the Flamboyant style that it achieved any further signal artistic triumphs in France.

Rouen. Portail des Libraires

One of the most successful works of the later French Geometrical style is the north transept of the cathedral at Rouen, with the PORTRAIL DES LIBRAIRES, which is dated about 1280, and of which Jean Davi is said to have been the architect (Plate LV). If this is compared with the earlier façades it will be seen how attenuated all the details had become at the end of the 13th century, how thin and wiry the mouldings, and how shallow the recessing of the planes.

Its entrance screen

A long narrow court leads up to this portal, entered from the street at the other end through a magnificent double gateway or screen, erected in 1484, where we find fully developed the next and final stage of French Gothic (Plate LVI). But to the Flamboyant style we shall return in a later chapter.

Flamboyant Gothic

[1] *Dict. Rais.* vol. I. p. 154.

CHAPTER XI

ENGLAND

THE TRANSITIONAL PERIOD

Saxon architecture

THE native architecture of Saxon England, which was highly interesting, and had a distinctive character of its own, was practically wiped out by the foreign style imported from Normandy. Many of its buildings were large and important, and even won the admiration of the conquering Norman: and for a short period in Northumbria the school produced sculpture of remarkable excellence, scarcely equalled by any contemporary work in Southern Europe. The Saxon style bore stronger traces of Roman influence than the Norman which superseded it, and which of all the Romanesque styles is least affected by Roman tradition. The first introduction of the foreign style into England by Edward the Confessor, —a style, as William of Malmesbury says, never before seen there,—was followed after the Conquest by such a burst of pulling down and reconstruction as was only equalled by the great period of cathedral building in France during the reign of Philip Augustus; and no great structure of Saxon times has survived it.

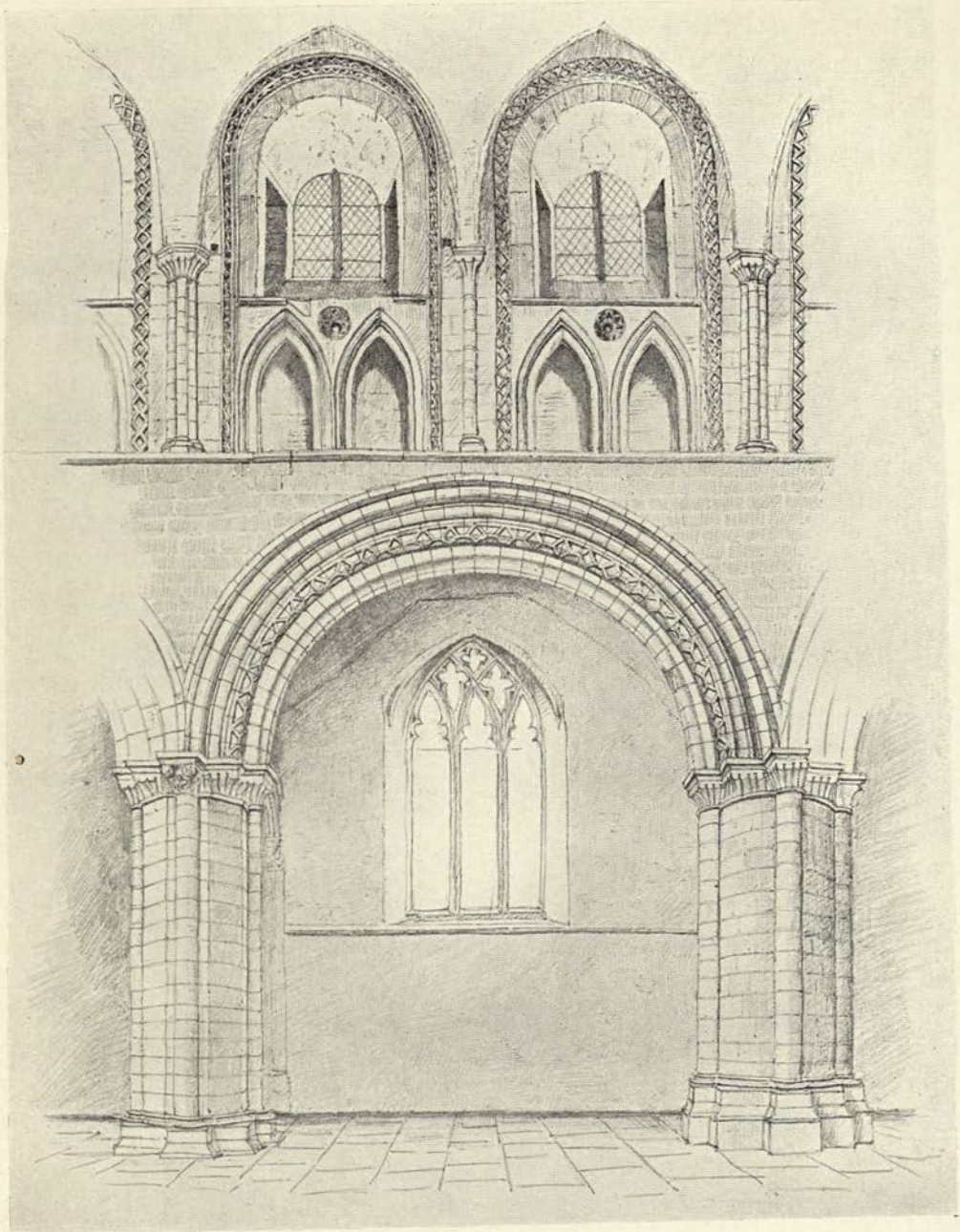
Excellence of Northumbrian sculpture

Introduction of Norman

Norman Romanesque

In a former volume[1] I have traced the progress of English Romanesque from the Conquest to 1170 or 1180;

[1] *Byzantine and Romanesque Architecture*, vol. II.



T. G. J. S. DAVID'S CATHEDRAL—The Nave

from the rude and semi-barbarous, though impressive simplicity of Winchester and S. Alban's, to the more refined Norman of Ernulf and Conrad at Canterbury, the naves of Peterborough and Ely, and the delicate arcades of the Galilee at Durham. In all these the round arch still held its own, and if the aisles were vaulted the nave was still ceiled with wood. In France meanwhile pointed architecture had appeared at S. Denis which was begun in 1140, at Sens which was begun in 1143 and finished in 1168, at Noyon and Paris which were begun in 1150 and 1163. The pointed arch had already made its appearance in England as early as the middle of the 12th century. The nave arcades of Fountains Abbey, built between 1140 and 1150 are pointed, though surmounted by a round arched clerestory. The transitional nave of WORCESTER Cathedral, of which only the two western bays remain, displayed a mixture of pointed arches and round (Fig. 73). The great arcades, dating from about 1175, have pointed arches on well-developed clustered piers; the clerestory triplet has two pointed arches flanking a round arch opposite the single round arched window; and the triforium has round-arched openings surmounted by a pointed arch. The Romanesque square abacus survives, and the arches of triforium and clerestory are decorated with the Norman zigzag and other primitive ornaments. The high vaults of these two bays of the nave are later, dating probably from early in the 14th century, but the clustered wall shaft of Norman work in front of the pier implies that a vault over the nave had been intended from the first. These bays at Worcester form a very important link in the early development of English Gothic independently of any French influence.

Beginning of pointed architecture in France

Fountains Abbey 1140–1150

Worcester nave c. 1175

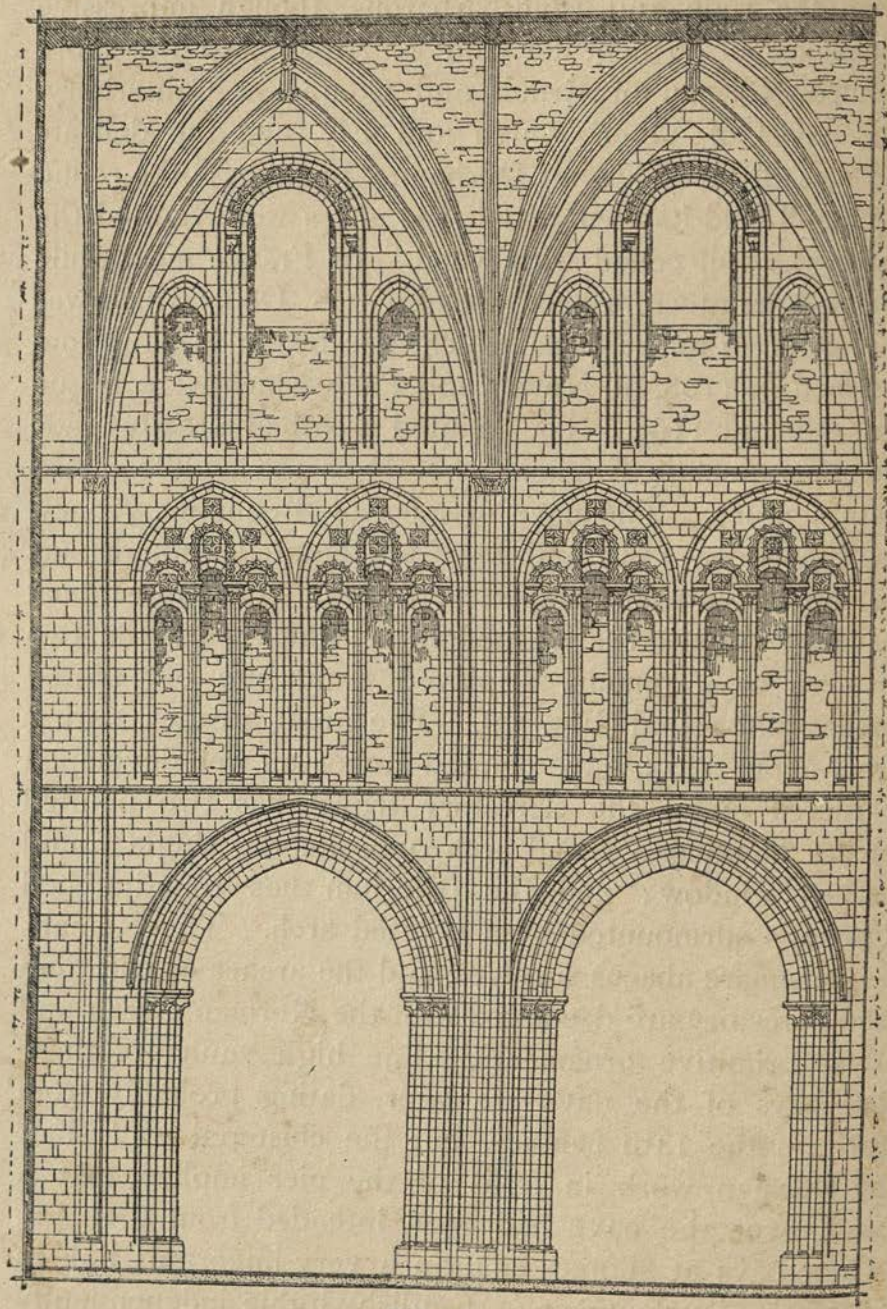


Fig. 73.
From "The Builder"

The nave of S. DAVID'S cathedral, built by Bishop Peter de Leia between 1176 and 1198, is mainly Romanesque, though of a very late type, with round-arched arcade and clerestory, plentifully adorned with a great variety of Norman zigzags; but it has a triforium of pointed arches (Plate LVII). Its transitional character is marked by the detail of the arch-mouldings which are almost Early English in detail (Fig. 74), by the quasi-Attic base, by the concave profile of the fluted cushion capitals, and by the primitive foliage of some of them. From the wall-shafts of the upper storey it would seem

S. David's nave 1176–1198

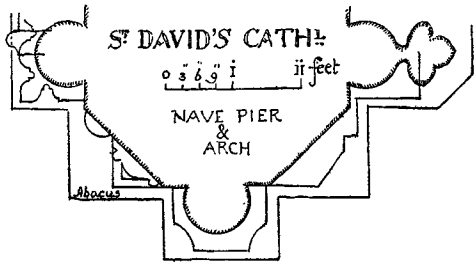


Fig. 74.

that de Leia's architect contemplated a sexpartite vault over the nave.

The obvious intention both at Worcester and S. David's to vault the naves in the last quarter of the 12th century, though in one case this was not done till later, and in the other not at all, shows that this final achievement of mediaeval architecture had already taken possession of the mind of the builders. It is even maintained that it had been actually realized half a century earlier at Durham (Plate LVIII), where it is argued by some writers that the present ribbed nave vaults date from 1133[1]. The

Ambition to vault naves

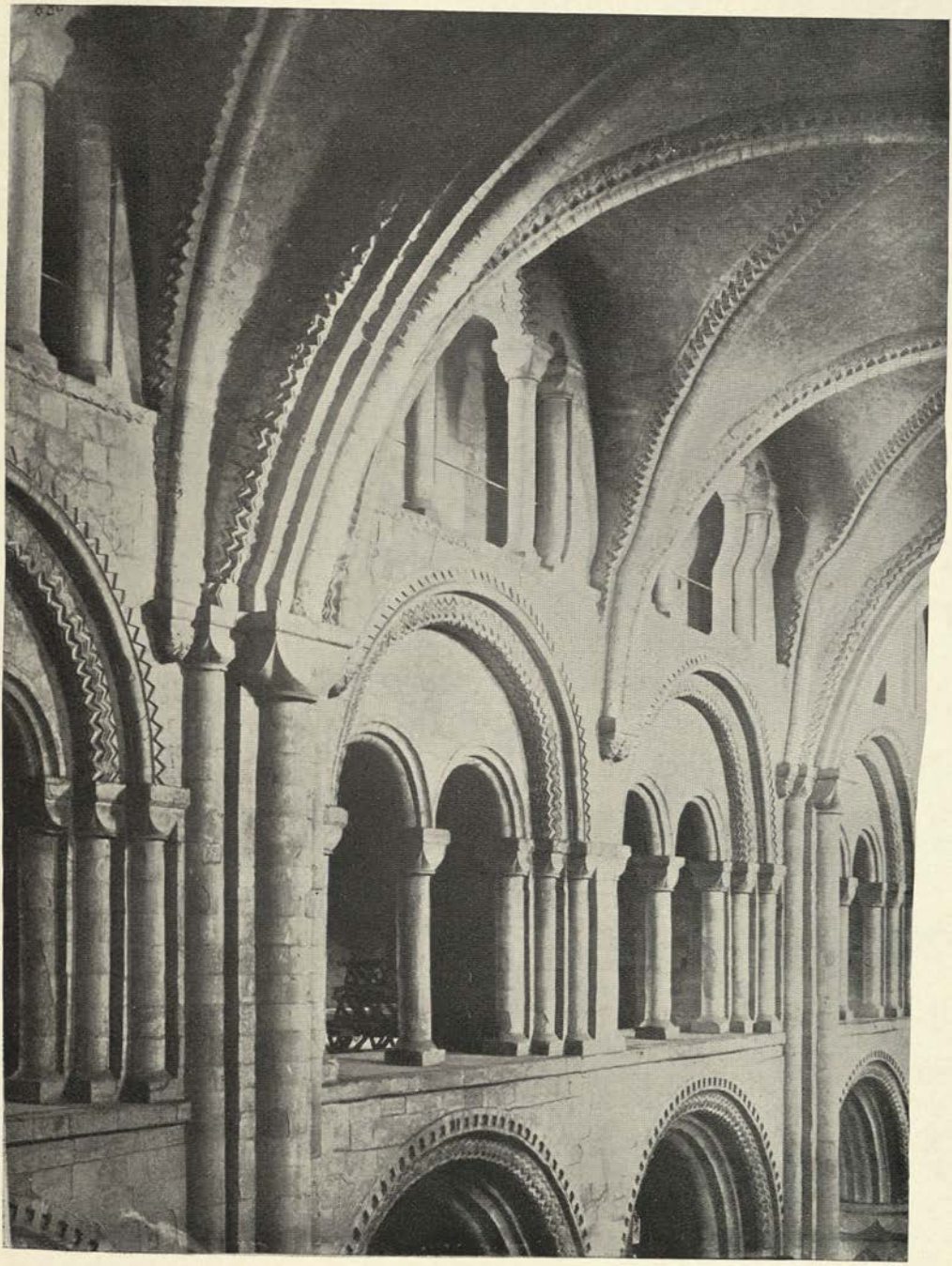
[1] Mr Bilson in *Journal R. Inst. Brit. Architects*, 3rd series, vol. VI. p. 295, etc.; Canon Greenwell, *Durham Cathedral*, p. 36.

Durham nave vaults

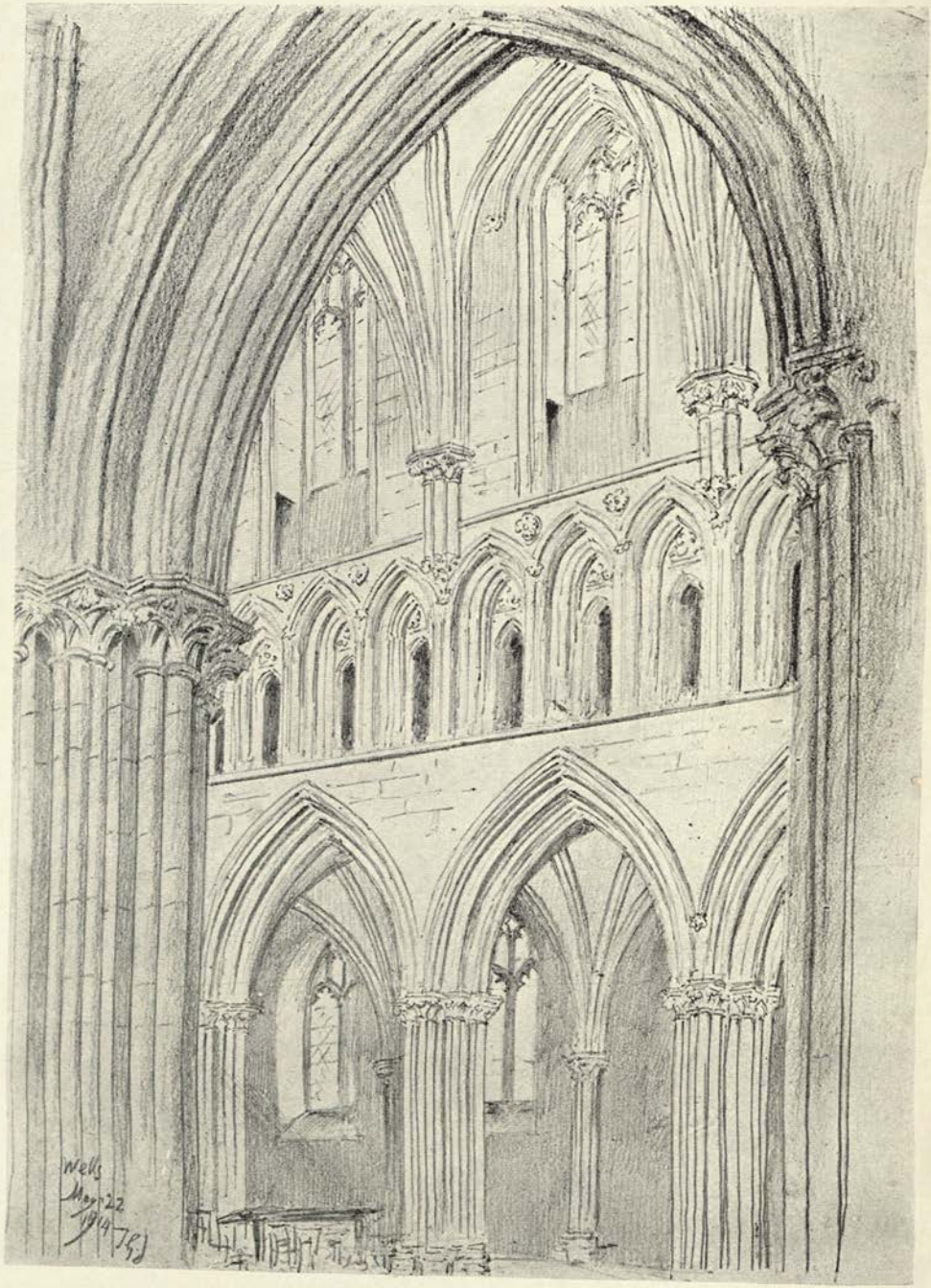
chronicle of the abbey states that at the death of Bishop Flambard in 1128 the nave was built *usque testudinem*, and that in the interval before the election of the next bishop in 1133 the monks finished the church. But as Mr Bond[1] and M. de Lasteyrie point out, *testudo* does not necessarily mean a stone vault. It might mean a wooden roof, and in fact the existence of wall-shafts in the south transept running up to the top of the wall implies that such a covering was originally intended there. There are other signs that the nave vault was an afterthought and not intended originally. The transverse arches are pointed, and in order not to rise above the height given by the Norman clerestory they are depressed and segmental, which seems to show the work was not prepared for vaulting and the builders were in a difficulty. The diagonal ribs do not spring from the main group of capitals but from corbels inserted in the wall beside them, which they would hardly do had they been intended at first. Moreover as Flambard only built up to the *testudo*, if the *testudo* be the present vault, he would not have built the clerestory, for the vault springs below it. But the clerestory is evidently coeval with the part below.

My own impression is that at the death of Flambard in 1128 the walls including the clerestory were ready for a wooden roof or *testudo*, and that in the interval between 1128 and 1133 the monks put on this wooden roof; that about the middle of the 12th century the stone vault was constructed, the capitals of the vaulting shafts being refixed lower down to receive the ribs as we know was done at S. Etienne, Caen, and corbels being inserted to take the diagonal ribs, for which there was no provision

[1] *v.* Mr Bond in *Journal of R.I.B.A.* above cited.



DURHAM CATHEDRAL—The Nave



T. G. J. WELLS CATHEDRAL—The Nave

in the group of shafts intended originally for the timber roof[1]. Durham cathedral

But whatever be the date of the existing vaults of the nave and transepts it would seem that the choir had a stone vault of some kind even earlier in date which had become ruinous in 1235, and was then replaced by another. The chronicle speaks of it as an ancient structure erected over the shrine of S. Cuthbert by the piety of former generations[2].

The nave of WELLS cathedral (Plate LIX) is now attributed to Bishop Reginald de Bohun (1174—1191) who consecrated the late Romanesque Lady Chapel of Glastonbury in 1186, though Mr Freeman and older writers give the credit of it to Bishop Jocelin (1206—1242) the builder of the very different west front[3]. But though the whole nave is in the same early style, the three, perhaps four, western bays appear to be by a different and later hand than the rest, and these may be the work of Jocelin, who speaks not only of building but of enlarging the church, for it is hard to see where Wells cathedral nave

[1] M. de Lasteyrie seems to be of the same opinion: "même en concédant à M. Bilson que ses ogives sont parmi les plus anciennes d'Angleterre, elles sont tout au plus contemporaines de celles de Saint Denys." M. de Lasteyrie thinks on the strength of a springer which does not seem to belong to the actual vault that the original idea was to throw an arched wall across the nave at each of the larger clustered piers that alternate with the cylindrical columns. *Architecture Religieuse en France à l'Époque Romane*, pp. 497, 503. This was the plan at S. Miniato, Florence, and the Norman church of Cerisy la Forêt. It would explain the alternation of the great and lesser columns.

[2] "ubi supra sacrum illius sepulchrum devotio veterum lapideas erexit testudines, quae jam nunc plenae fissuris et ruinis dissolutionem sui indicant imminere." Indulgence of Bp. Northwold of Ely a.d. 1235.

[3] *Cathedral Church of Wells*, E. A. Freeman; Canon Church says there is no direct record of Reginald's work on the cathedral, but several documents allude to building going on during his time. A deed apparently of 1194 contains a gift "ad constructionem novi operis, &c." *Early History of the Church of Wells*, p. 82.

Wells cathedral

else his enlargement could have been[1]. The difference between them and the west front, supposing both to be Jocelin's work, may be explained by supposing him to have finished the last three bays of Reginald's nave in the local style early in his long episcopate, probably about 1219, after settling the dispute with Glastonbury; and to have built the front towards the end of his life in the new manner of Salisbury and Lincoln.

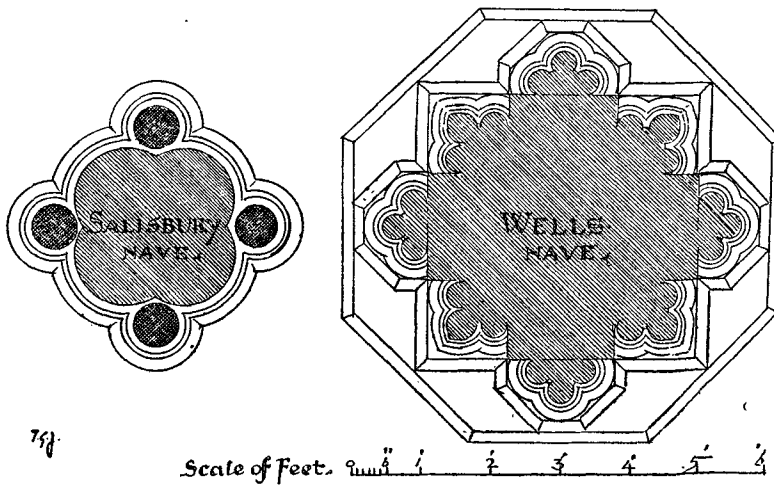
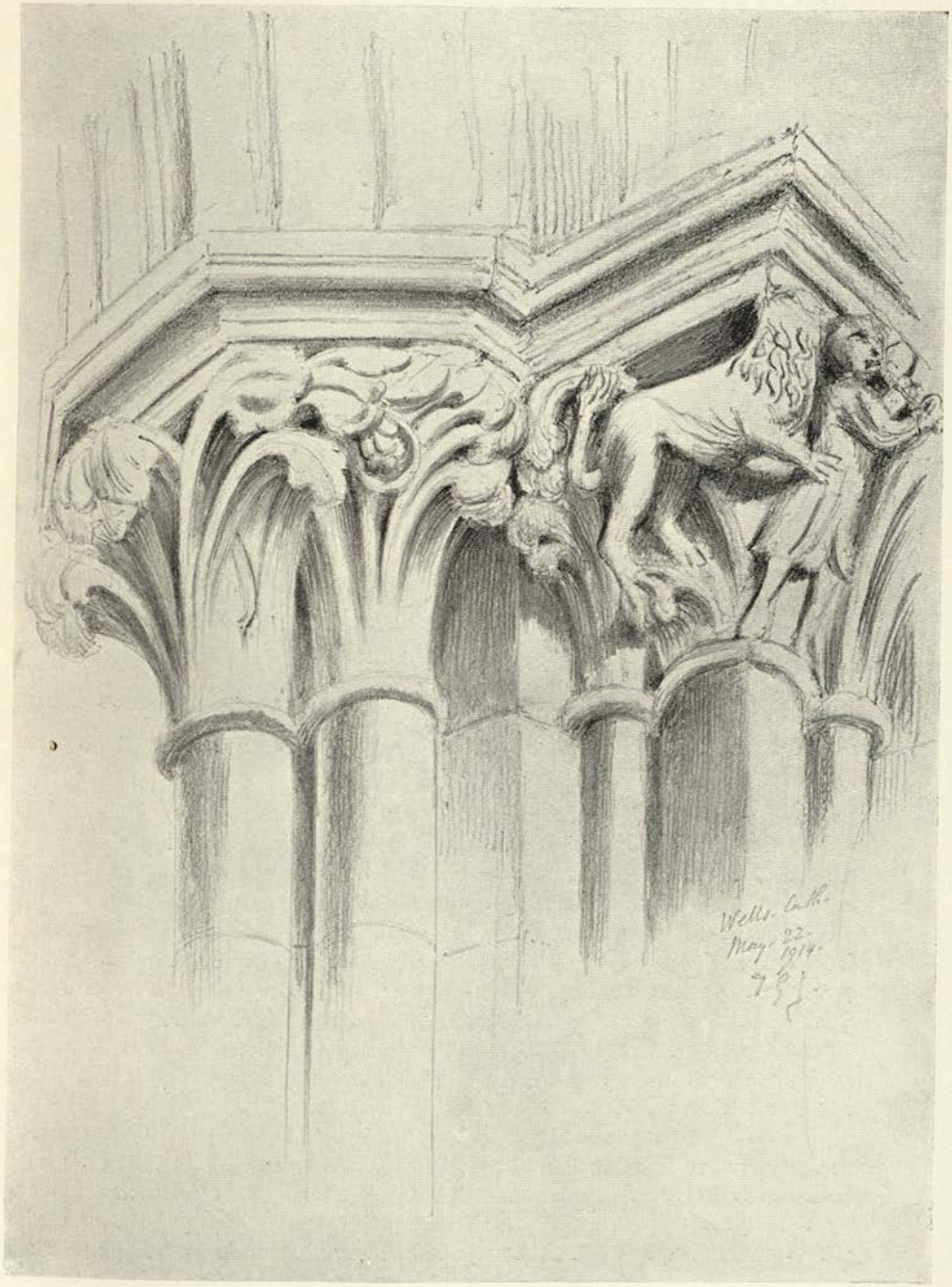


Fig. 75.

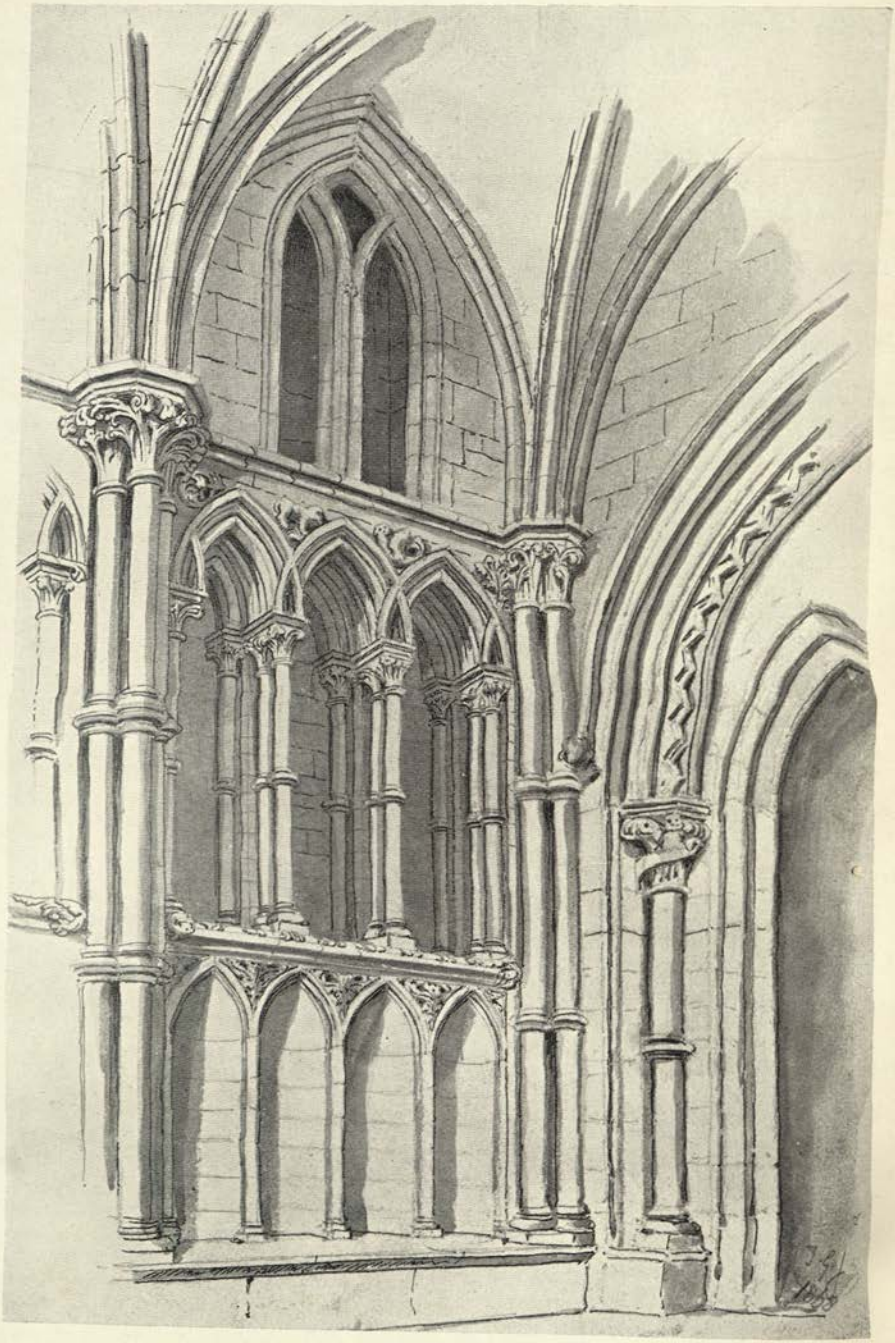
The nave

Here we have extraordinarily massive piers (Fig. 75) of clustered shafts carrying pointed arches richly moulded in several orders, surmounted by a triforium of pointed openings resembling that at S. David's, which is contemporary and may perhaps be the work of Somerset masons. The size of these piers at Wells may be appreciated by comparing them with those of Salisbury, which

[1] Ecclesiam Sancti Andreae Wellensis, quae periculum ruinae patiebatur prae sua vetustate,...aedificare coepimus et ampliare. Deed of 1242, cited by Canon Church. *Early History of the Church of Wells*, p. 151.



T. G. J. WELLS CATHEDRAL—Capital in Nave



T. G. J. WELLS CATHEDRAL—The North Porch

is a much larger church. In Fig. 75 they are both drawn to the same scale. There are no wall shafts to divide the building into bays, but the triforium forms a continuous arcade from end to end of the nave, giving that part of the church the effect of a basilica. The vault has pointed ribs both transverse and diagonal, and springs from short colonnettes carried on corbels in the spandril of the triforium. It has no flying buttresses above the aisle roof, but rests on a thick clerestory wall, strengthened by shallow buttresses outside. These are carried by flying arches across the triforium below the roof, too low to be of any use in receiving the thrust of the vault. Both here and at S. David's the triforium arches have no jamb shafts, but the arch moulding is continued down the sides.

Wells cathedral

The nave capitals are remarkable, and have nothing quite like them elsewhere. They have the square abacus which savours of the vanishing Romanesque style, and in their foliage consequently the tradition of the Corinthian volute makes itself felt. But they have a wonderful freedom of design that puts them in a category by themselves, and they must be the work of an independent genius (Plate LX).

The nave capitals

The north porch (Plate LXI), which even Mr Freeman admits may be older than Jocelin, is especially beautiful,—a true gem of early Gothic art. Nothing can be more delightful than the wall arcades, simple below with exquisitely wrought foliage in the spandrils (Fig. 76), and rich above with coupled and clustered colonnettes and vigorously sculptured capitals. Intersecting mouldings, such as these in the porch, are a feature of the work at Wells. They occur again in Bishop Jocelin's western towers, and the same idea of lines crossing and

The north porch

Wells cathedral

intersecting one another gives the motive of most of the capitals[1].

The nave and north porch at Wells are the first really Gothic buildings of importance in England, and they show remarkable originality, differing not more from what preceded than from what followed under French influence at Canterbury and from the early English of Lincoln and Salisbury.

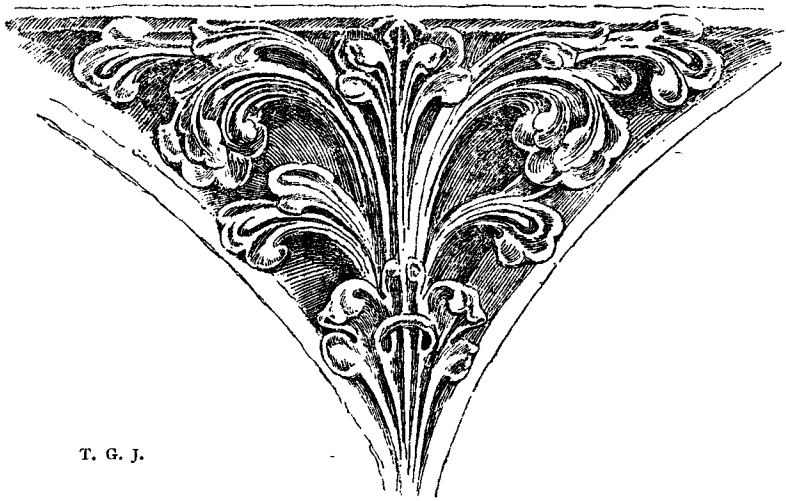


Fig. 76.

The transition

From these instances it is plain that at the end of the 12th century architecture, here as well as in France, was passing out of the transitional stage. The pointed arch had come into vogue, and though here and there Norman Romanesque still held the field, especially in monastic buildings, yet even there it had begun to give way to a lighter kind of design. In the Galilee at Durham in 1175 we still find round arches with zigzags, but they were carried originally on pairs of marble

Durham Galilee

[1] For similar intersections at Norrey in Normandy *v. sup.* Fig. 62, p. 152.

columns so slender that they had to be strengthened afterwards[1]. The monks at Peterborough still clung with monastic fervour to the round arch and to Romanesque bulk and proportion in their nave and transepts, which were not finished till 1193; but the round Church of the Temple, consecrated in 1185, has pointed arches on clustered shafts of marble, though the triforium above has an arcade of interlacing round arches. Above all, the architects had seriously undertaken to vault their

Peterborough nave

The Temple church

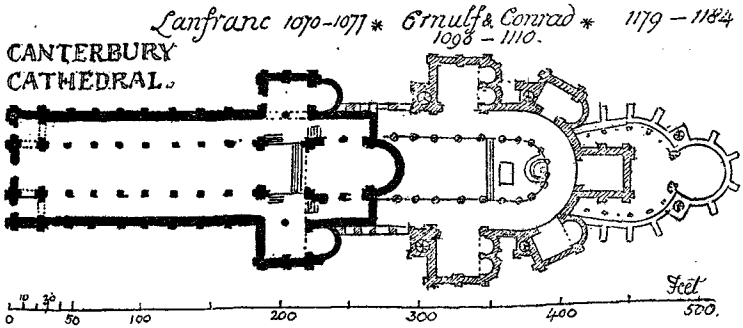


Fig. 77.

naves and not only their aisles; and this influenced their construction radically in the future.

The artists of the day were consequently in a receptive spirit, ready for any movement in a new direction, and open to any fresh suggestion.

In 1174, for the second time, a foreign influence crossed the channel into England, and established itself at CANTERBURY (Fig. 77).

In September 1174, four years after the murder of Becket, the glorious choir of priors Ernulf and Conrad, which had stood only forty-four years since its dedication[2],

Canterbury cathedral

[1] *v.* my *Byz. and Romanesque Archit.* vol. II. Plate CXLVIII.

[2] It was begun in 1093.

Canterbury cathedral

caught fire and was reduced to ruin. The monk Gervase who saw the conflagration and has left an account of it and of the rebuilding, tells us how the people were astonished that the Almighty should have allowed such things, and how they tore their hair, and beat the walls with their heads and hands, blaspheming the Lord and His saints, the patrons of the church, for not better protecting it[1]. Only Lanfranc's nave, with parts of the exterior walls of Conrad's building as we now see them, and his crypt survived.

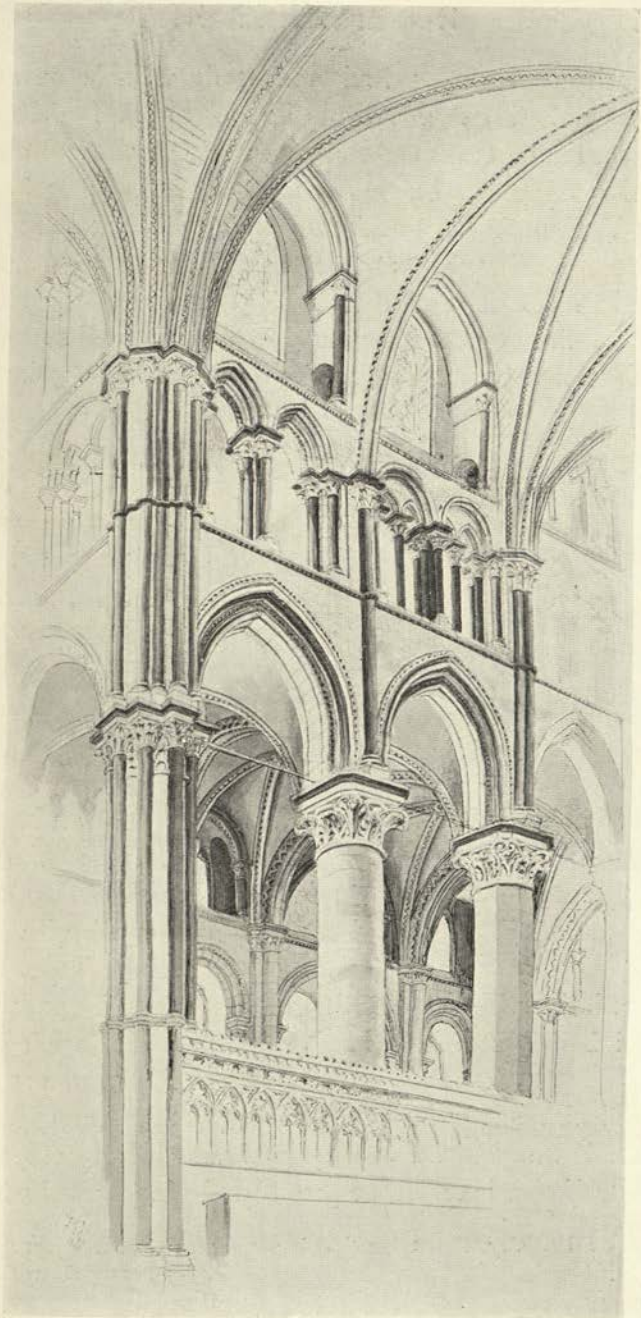
William of Sens

From among a number of architects, both French and English, the monks entrusted the work of rebuilding to one William of Sens, the place of Becket's exile, where the new cathedral had been completed only six years before the fire at Canterbury. When he had conducted the work for four years William the Frenchman fell from the scaffolding and was so much hurt that though he was able for some time to direct the building operations from his bed, he went home to France in 1179.

William the Englishman

His successor was William an Englishman, "small in body," as Gervase says, "but in workmanship of many kinds acute and honest." By this time the new choir had been built, and vaulted as far as the east side of the eastern transept; and the next four bays, as far as the narrowing of the structure, caused by the retention of the Norman chapels of S. Andrew and S. Anselm, had been erected up to the springing of the groining (Plan Fig. 77). It was a vast improvement even upon Conrad's "glorious choir." Gervase points out the difference. "The pillars of the old and new work are alike in

[1] Dean Stanley says "how far more like the description of a Neapolitan mob in disappointment at the slow liquefaction of the blood of S. Januarius than of the citizens of a quiet Cathedral town in the County of Kent." *Memorials of Canterbury.*



T. G. J. CANTERBURY CATHEDRAL—The Choir

form and thickness but different in length, for the new pillars were almost twelve feet longer." Exquisitely sculptured capitals replaced the old plain ones, and whereas the old arches and other features of the masonry were plain, and wrought with an axe, the new work was well chiselled and appropriately carved. The new choir had innumerable marble columns but the old had none, the plain groining of the aisles in the ambulatory was replaced by fine ribbed and keyed vaults; and a beautiful vault of stone and light tufa took the place of the wooden ceiling of the choir[1].

Novel designs of the new church

This raising of the nave arcade by some twelve feet involved an entirely new proportion of the three storeys. The lower one was heightened at the expense of the upper. In the old choir of Ernulf and Conrad, and the still older choir of Lanfranc, the three storeys had been proportioned in the Norman fashion, with a triforium almost as high as the arcade below it. We see this proportion in the Norman transepts of Winchester, and in the naves of Norwich, Ely, and Peterborough. At the contemporary cathedral of Tournay in Belgium the triforium seems the larger of the two. At S. Etienne, the Abbaye aux Hommes at Caen, where Lanfranc was the first abbot, which seems to have been the model for his cathedral at Canterbury, if the whole height is divided into 32 parts, 13 go to the arcade, 10 to the triforium, and 9 to the clerestory. Whereas in William the Frenchman's choir at Canterbury, similarly divided, the arcade takes 18 parts, the triforium 5, and the clerestory 9. A glance at the two elevations will show the enormous improvement effected by the new proportion (Fig. 78).

Heightened proportion of arcade

[1] Gervase, cited in Willis's *Canterbury*, p. 59.

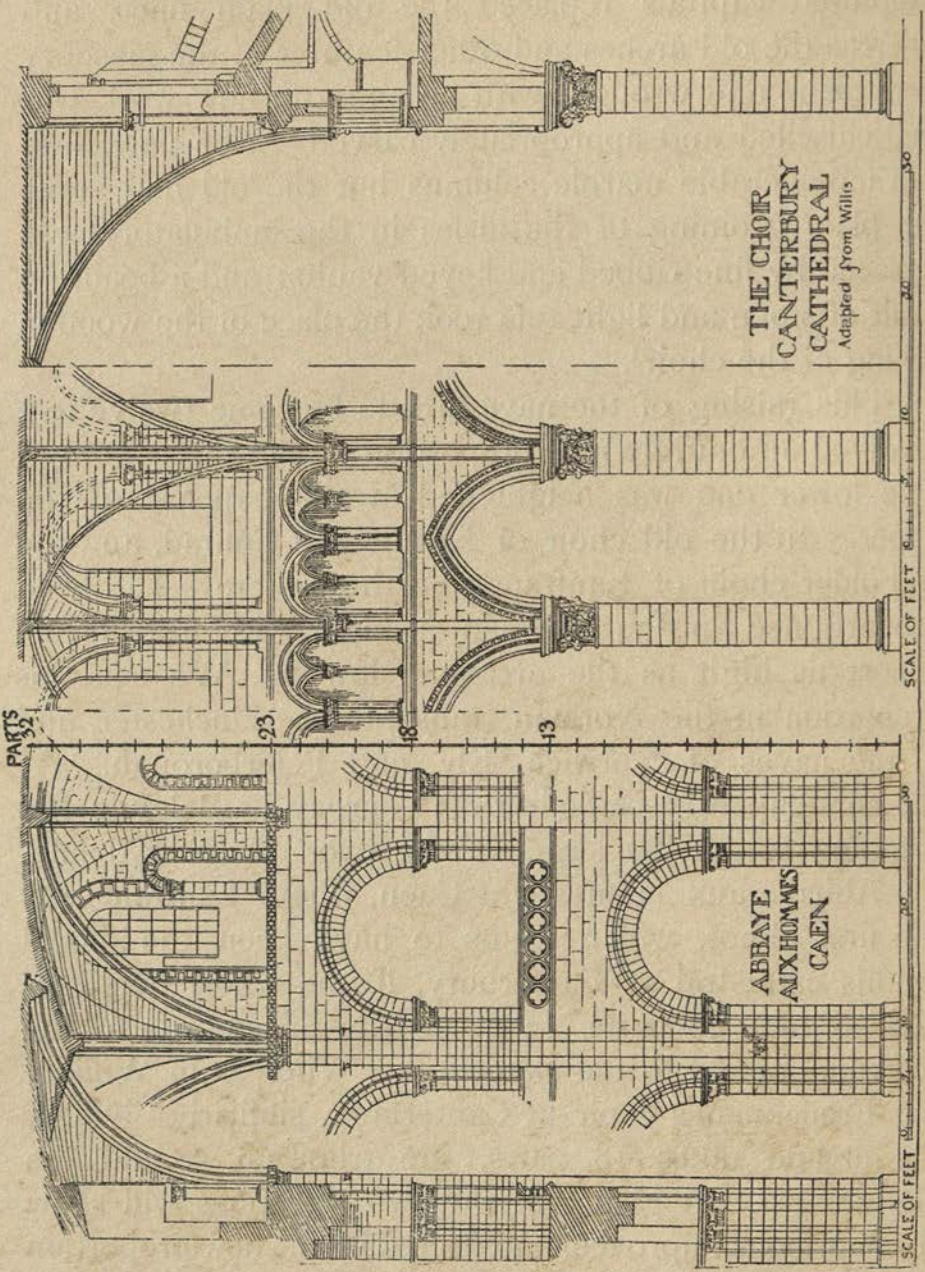

THE CHOIR
CANTERBURY
CATHEDRAL
Adapted from Willis
SCALE OF FEET
ABBAYE
AUX HOMMES
CAEN
PARTS
32
23
18
13
SCALE OF FEET

Fig. 78.

Canterbury cathedral. Round arches and pointed used together

In the new work round and pointed arches are used together, but the latter predominate. Pointed arches were not new in England as we have seen already. But Canterbury may stand in England, as S. Denis in France, for the first great building where the pointed arch is frankly adopted as the ruling feature in construction.

The new window

Conrad's aisle windows were lengthened upwards, but not carried to the full height of the new aisle, leaving room above them for a second row of windows, with trefoil heads, and a passage along them in the thickness of the wall. These upper lights contain some of the most splendid examples of the painted glass for which Canterbury is famous.

The vault

The high vaulting is sexpartite, with pointed transverse arches, much stilted, springing from marble shafts that rise from the capitals of the great columns in the arcade; these shafts are clustered for the main transverse and diagonal group of ribs, single for the intermediate rib. At the crossing of the transept, and at the point where the plan bends inwards, the pier is surrounded by marble shafts, which are continued down to the ground. The vaults are level at the crown.

Comparison with Sens

If the view of this choir (Plate LXII) be compared with the nave at Sens (Plate I, p. 38 *sup.*), William's native place, many points of resemblance will appear, and also many points of difference. The proportion at Sens of the lower storey to the upper part, if I may trust the accuracy of my sketch, for I did not measure it, is almost identical, $\frac{18}{32}$, with that at Canterbury; the triforium, though simpler, is very like the English one. The vaulting at both places is sexpartite; the intermediate rib springs in the same way from a colonnette that stands

Canterbury cathedral. Difference with Sens

on the capital of the great column[1]. But at Sens the piers are alternately larger and smaller, expressing their different function as supporting the main ribs and the intermediate respectively. At Canterbury, except at the points above mentioned, they are all simple columns mono-cylindric or polygonal, and the difference between the main and intermediate ribs is expressed only by the alternation of clustered and single marble colonnettes that stand on the capitals of the great columns.

The coupled columns

The most striking instance of resemblance however is in the coupled columns which at Sens alternate with the great piers, and at Canterbury carry the structure of Trinity Chapel and the great apse (Plate LXIII). Curiously enough these are not the work of French William, who had gone home before they were built, but of English William who succeeded him. William of Sens had indeed used coupled columns in one place under an intermediate rib, just where the bend in the structure begins, but he had combined with them a pair of marble shafts which alters their character. English William's coupled shafts are much more like those at Sens than those of his predecessor, but instead of alternating them with larger piers as at Sens to express their different load, he has used them indifferently throughout. The idea of the coupled columns was no doubt given him by French William, but he used it in his own way, and probably not as his predecessor would have done. In the eastern part of the crypt, which is also the work of English William, the columns are round, and have the round abacus with a simple flat member below, undercut at bottom and with a necking, though in the upper church his shafts all have the square abacus.

Round abacus in crypt

[1] The clerestory windows at Sens are not part of the original design.

Phot. London Stereoscopic Co. CANTERBURY CATHEDRAL—Trinity Chapel

Canterbury cathedral. The mouldings

The mouldings of both the Williams are enriched with Norman billets and zigzags, and also with the Early English dog-tooth. The zigzags are of the later refined form, undercut and sunk. But besides these details the sections of the arches and vaulting ribs are much more elaborate than those at Sens, which consist only of square orders with a roll on each angle (*v.* Plate I). In this may be detected English taste, for throughout the whole Gothic period much more use was made of mouldings here than in France. One feature common to the two churches is the moulded band which ties the detached colonnettes to the wall. At Sens this occurs in the shaft that carries the intermediate rib; at Canterbury it ties in the marble colonnettes. These colonnettes are used much more profusely here than at Sens, and they are all of Purbeck or Bethersden marble which gives a different character to the design from anything in France, and is in fact an English characteristic of great importance. Its use at Canterbury was not invented by William of Sens, for it was already employed elsewhere in England, as far north as the Galilee at Durham, and other of Bishop Pudsey's buildings. William no doubt got the suggestion in England and welcomed it with true artistic instinct as a novel idea, for there was nothing like it in his own country. Marble was used thenceforth in all our important buildings for the colonnettes; Salisbury and the Early English part of Rochester are full of them; and at Westminster, Exeter, Ely, Lincoln, and the Temple not only slender detached shafts but main columns too are made of solid marble. Often, however, marble colonnettes in long lengths were set round columns of free-stone in low courses, and in that case they must have been inserted after the inner column had got its

The bands of columns

English use of marble

Canterbury cathedral

settlement, or the rigid marble would have been crushed and split, being incapable of sinking with the ashlar

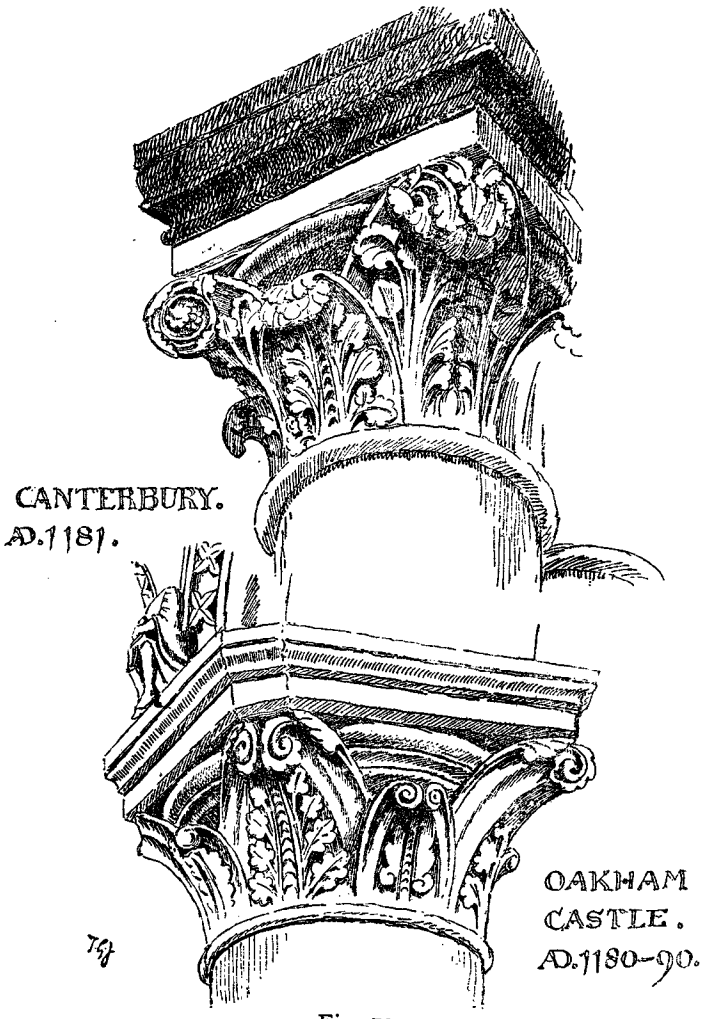


Fig. 79.

courses. Instances of such an accident have come under my own observation. This form of polychrome masonry is distinctly English and has no counterpart in France,

where when coloured masonry was introduced, as for instance in Auvergne, the treatment is quite different. Canterbury cathedral

But however strongly English taste shows itself in the details the general effect of the interior of Canterbury choir with its apsidal end is quite French, and belongs to a type of early Gothic church with which we are familiar on the other side of the Channel. General effect is French

In nothing is its French parentage shown more strongly than in the sculptured capitals. The foliage of The sculptured capitals

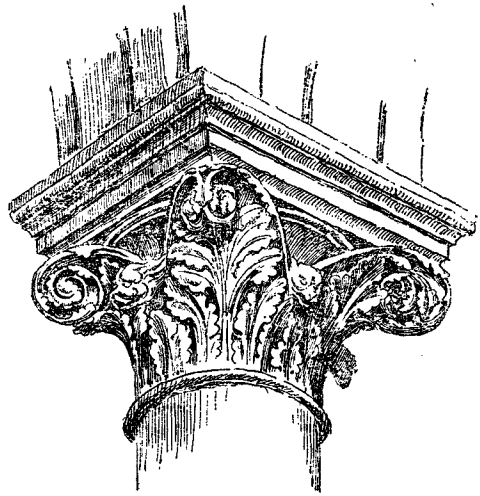


Fig. 80.

the coupled columns put up by English William (Fig. 79) might have been carved by the same craftsman who cut that at S. Leu d'Esserent (Fig. 80), which is almost exactly coeval with it. These capitals must be the work of French carvers whom William of Sens brought over and left behind him. But it is curious that they have no resemblance to the capitals at Sens, where those of the great columns are very abstract and severe, and those of the wall-arcades have foliage of a quasi-Byzantine

Canterbury cathedral

type mixed in many cases with birds[1]. In the angular knots of foliage that support the corners of the square abacus at Canterbury (Fig. 79) and in the distinct expression of the bell we see the survival of classic tradition, and of the Corinthian capital, though the hollow Corinthian abacus, that so long survived as a mere unmeaning ornament below the real abacus (*v.* Fig. 23, p. 64 *sup.*), is lost both here and at S. Leu. The same motive runs through all the capitals of the choir, resulting in the smaller capitals in something like the French *cap-à-crochet.*

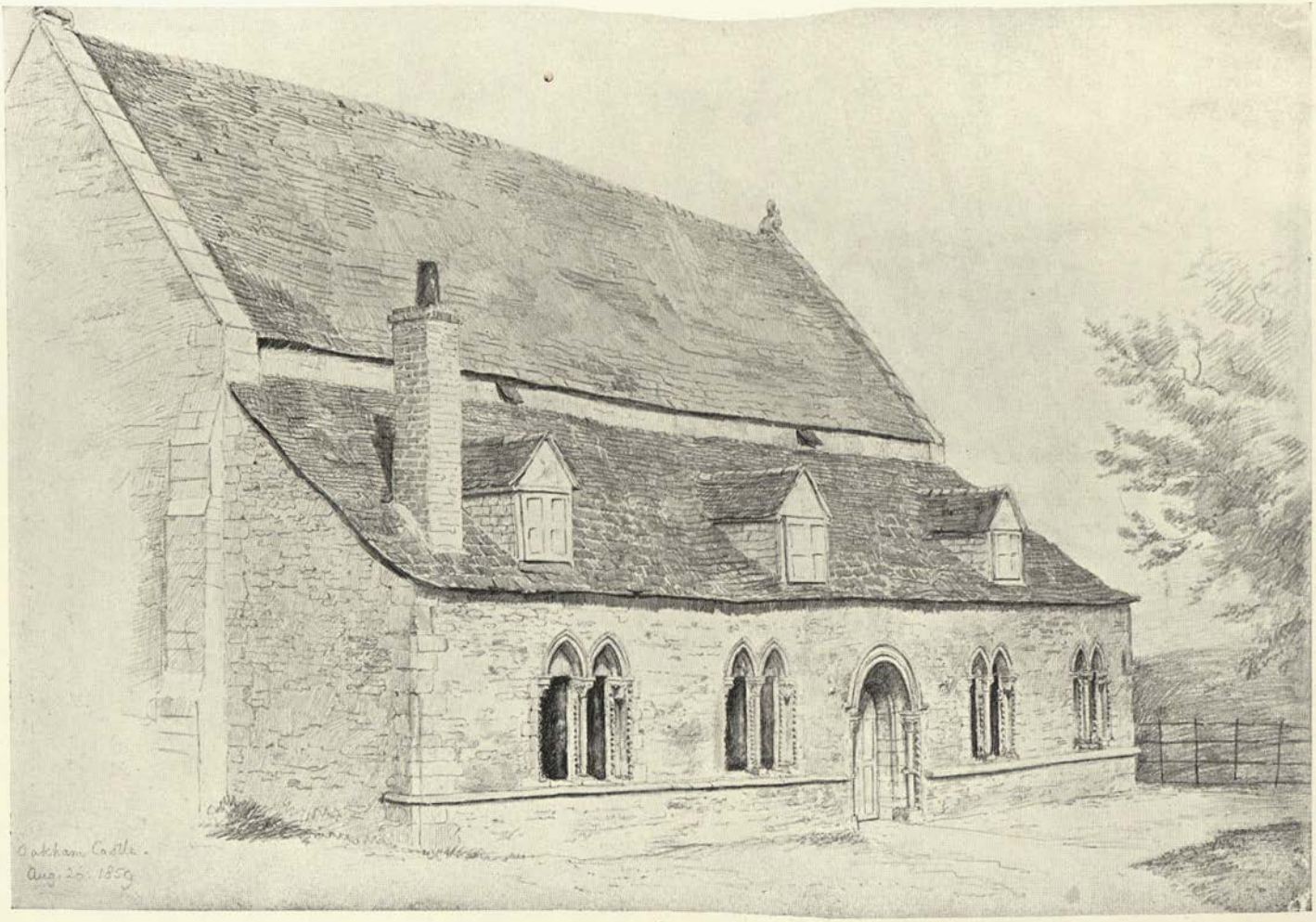
Survival of Corinthian type

The English round abacus

This type of capital did not long survive in England, for the round abacus which soon made its appearance required a very different treatment of the foliage: but we find something like it at Wells where the square abacus is retained, and in the Castle Hall at OAKHAM (Fig. 79), a building which is exactly coeval with English William's work at Canterbury, and may perhaps have had the use of some of his workmen (Plate LXIV). It is one of the most interesting domestic buildings in England, and one of the best examples of the transition from Romanesque to Gothic. It consists of a nave with an aisle on both sides divided by an arcade of four round arches of a single order, carried by three pillars and a respond bracket at each end. On the abacus there is room on the side next the nave for a little seated figure holding a musical instrument. The aisle windows are of two lights with pointed arches outside, united on the inside under a single round arch ornamented with the dog-tooth, and the same ornament is used in the windows and the arcades.

Oakham Castle

[1] There is an illustration of one of these in my *Reason in Architecture*, Plate II.



T. G. J.

OAKHAM CASTLE HALL

LINCOLN CATHEDRAL

CHAPTER XII

THE EARLY ENGLISH STYLE

THE influence of Canterbury on English architecture was very considerable, but its ultimate effect was not so much to set a French fashion in architecture as to provoke the native style to break out on original lines, which from the first began to take an independent and national direction.

From Stow in Lincolnshire the Saxon bishopric had been moved at the Danish invasion to the security of Dorchester in Oxfordshire; whence after the Norman conquest Remigius of Fécamp, whom the Conqueror made bishop, transferred the see to the old Roman town of Lindum[1]. Here, about 1075, was begun the first cathedral of LINCOLN (Plate LXV), a cruciform building ending in an apse, of which only the west end, with its deeply sunk portals and curious semi-circular niches covered by semi-domes, still remains imbedded in the later frontispiece. Richly decorated Romanesque doorways were inserted in the older arches by Bishop Alexander about 1141, who also is said to have vaulted the

Lincoln cathedral

[1] "This Remigius was a man, though of so high and noble a mind, yet so unreasonable low of stature, as hardly he might attaine unto the pitch and reputation of a dwarfe: So, as it seemed nature had framed him in that sort; to shew how possible it was that an excellent minde might dwell in a deformed and miserable body." Godwin, *Catalogue of the Bishops of England*, etc.

Lincoln cathedral

nave in stone after a fire had destroyed the original wooden roof[1]. In 1186 when Hugh a Burgundian from Avalon near Grenoble became bishop he found the church half ruined by an earthquake, and in 1192 he began the new choir which marks an era in the history of English architecture.

S. Hugh's choir

Though S. Hugh of Avalon did not live to complete his scheme, the plan of the present choir and transepts is his. Like Canterbury his church had two transepts, one at the central crossing and the great tower, and another at the east end of his choir, beyond which he built an apse with an ambulatory, and radiating chapels, in the manner of a French *chevet*, though with certain differences, of which the foundations have been traced below the floor, the apse itself having been destroyed in 1255[2] (Fig. 81). The architect's name is for a wonder preserved; he was Geoffrey de Noiers, who appears to have been an Englishman, though perhaps of French or Norman extraction.

The architect

West of the work of Bishop Hugh of Avalon remained the central tower of the Norman church, and the nave of Remigius with the stone vault of Bishop Alexander. In 1237 or 1239 the old tower fell, crushing in its fall, it is said, the vault of Bishop Hugh's choir, and injuring some of his piers. And this introduces the controversy that has raged over the date and original construction of this part of the building. It has been maintained by Mr Bond

Fall of the Norman tower

[1] Consecratus est Cantuariae vicesimo secundo Julii 1123. Anno deinde sequente ecclesia ejus Cathedralis, nuper constructa et vix dum absoluta, fortuito incendio conflagravit. Quam refecit ille, et contra similes casus munivit, laqueari addito fornicato.

[2] The plan is given differently by different writers. I take that by Mr Watkins, published in the *Journal of the Royal Institute of British Architects*, vol. XVIII. 3rd series, p. 35.

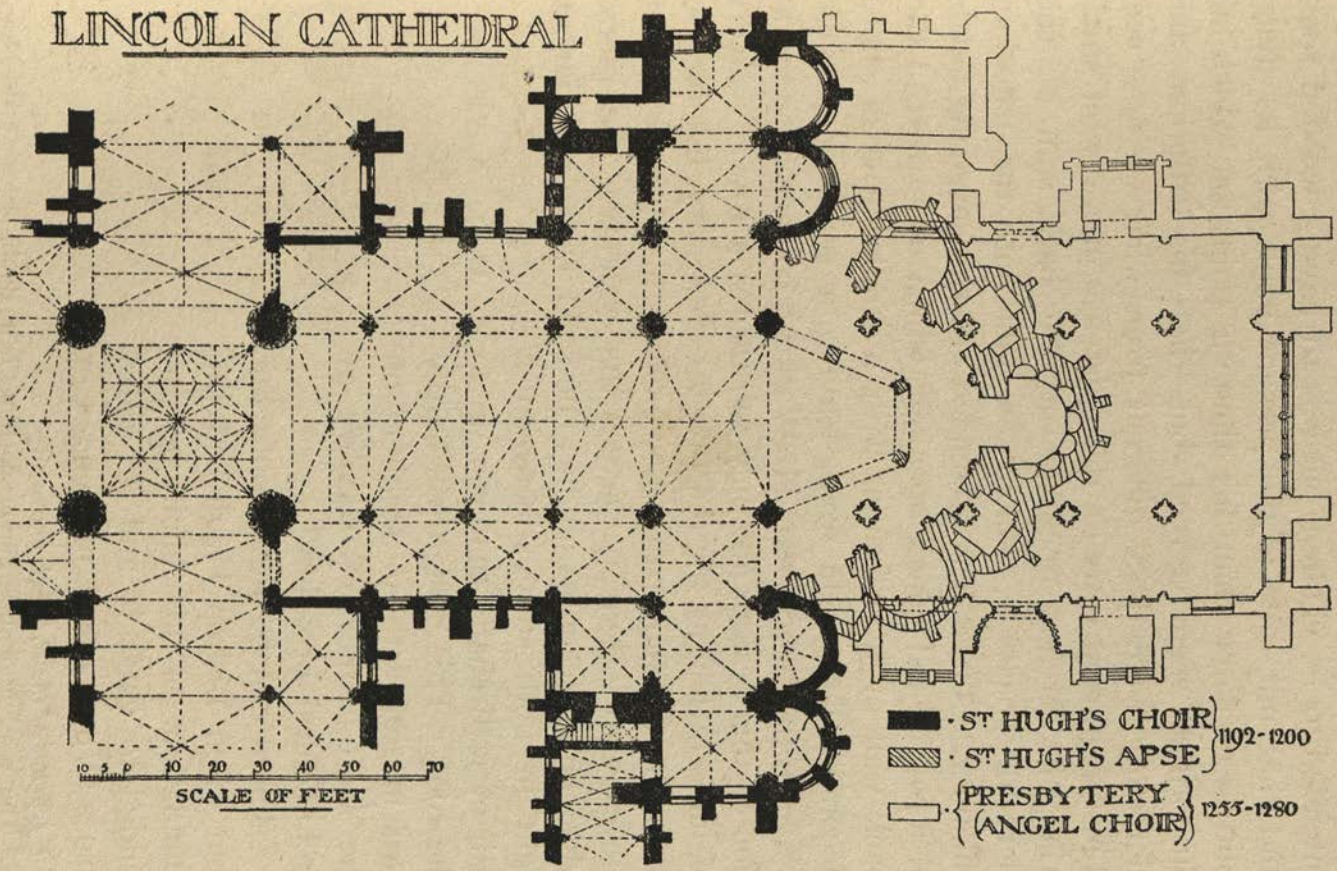

LINCOLN CATHEDRAL
10 5 0 10 20 30 40 50 60 70
SCALE OF FEET
ST HUGH'S CHOIR
ST HUGH'S APSE
1192-1200
PRESBYTERY
ANGEL CHOIR
1255-1280

Fig. 81.

Lincoln cathedral. Theories as to the vaults

and Mr Watkins[1] that Hugh of Avalon's choir was not intended to be vaulted, but was to have a wooden roof; and that not only is the present vault with its flying buttresses later than his time, a point on which all authorities seem agreed, but that his triforium and clerestory were quite different from what we now see.

Theory of original triforium

Their argument rests on the existence of a row of small triangular arched openings in the back wall of the clerestory passage, which now look into the triforium chamber. These it is pretended are the surviving heads of a row of tall lancet openings which once pierced the back wall of a triforium, with a similar row of more decorated lancets in front, leaving a space or passage between the two rows.

Mr Bond and Mr Watkin's design

Mr Watkin's conjectural restoration of this design, not only substitutes a row of lancets of uniform height for the present clerestory, but on the strength of a sunk panel now existing in the back wall of the clerestory actually pierces the wall over the piers, which on all accounts ought to be solid, with a wide lancet light in both storeys between a pair of wall shafts that run up to the roof. This design will hardly pass muster with an architect on the score either of stability or architectural propriety[2].

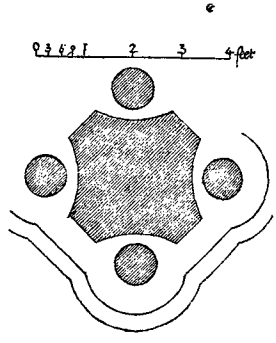


Fig. 82.

S. Hugh's choir intended for vaults

There can be little doubt but that when Bishop Hugh laid the foundation of his choir he intended to vault it and its aisles also. What other meaning can

[1] *Journal of the R.I.B.A.* above cited.

[2] The meaning of these curious openings is no doubt obscure; they may have been intended for relieving arches, but if so they are quite superfluous, and even mischievous.

T. G. J. LINCOLN CATHEDRAL—The Choir

we attach to the plan of his piers (Fig. 82) with the four channellings made to receive four marble colonnettes, of which the back one took the aisle vault, and the two side ones the arcade, while the front one, of which the lower part was cut away for the stalls about 1370, but of which the base remains, could have had no other purpose than that of sustaining the high vault of the choir. Lincoln cathedral

The aisle walls of S. Hugh's work have a curious double arcade. The inner arcading consists of pointed arches well moulded, and carried on detached shafts; the outer of not very graceful trefoiled arches, also carried on detached shafts with a label moulding and carved figures in the spandril (Fig. 83). The double wall arcade

A great point is made of this wall arcade by those who hold that S. Hugh did not intend to vault his aisles. They contend that the front arcade was put on when, by a change of purpose, vaulting was proposed, in order to strengthen the wall for the additional weight. The back arcading which is in the solid of the wall they consider the original structure; and the front arcading which is not concentric with the back, but alternates with it, so that the front shafts stand opposite the middle of the back arches, they consider to be an addition, as it is not bonded to the back, but worked independently of it and simply stands against it. On the other hand there is the fact that the wall above containing the windows is solid over both thicknesses of arcading, so that there can be no appreciable difference of date between them. Moreover the additional strength given by a thin arcading resting on 6″ marble colonnettes is too trifling to be of any account, and lastly as to the absence of bond I fail to see how the work could have been constructed differently, for there is no opportunity of bonding the two arcades

Lincoln cathedral

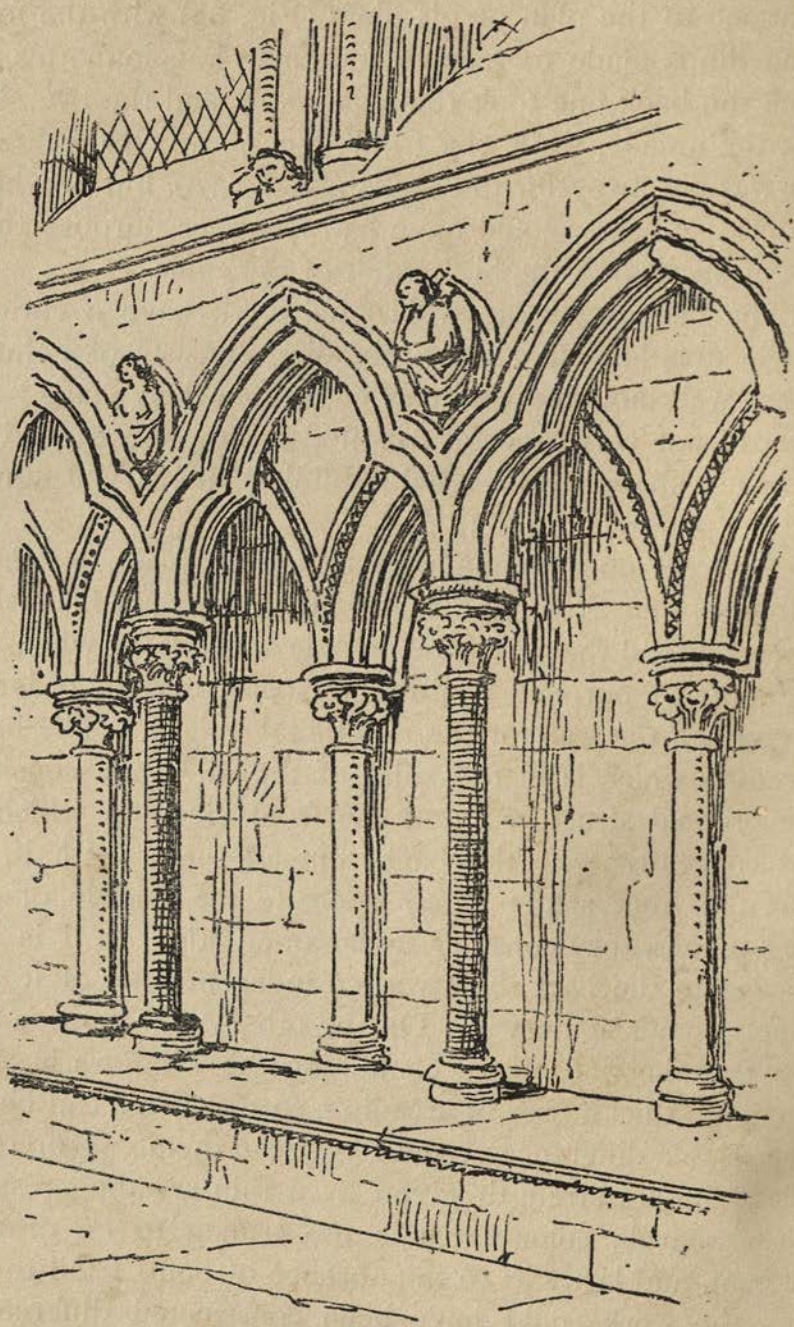


Fig. 83.

Lincoln cathedral

together till the wall above is reached, where, in fact, the bonding does begin. I believe the double arcade to be the original design[1], though a very curious one; but it is not unique, for the triforium at Beverley is like it, and there is the same alternation of colonnettes in the Galilee at Ely[2].

Importance of the date

The importance of the controversy consists in the question of date; whether vaults were intended and prepared for or not at the rebuilding of the choir in 1192. It is very unlikely that they were not, for the nave had already been vaulted after the fire of 1144; the nave vaults at Durham, if not so old as some think, are at least as old as the middle of the century; the choir of Canterbury had been vaulted before 1179; and the retro-choir at Winchester was vaulted in fully developed Early English work about 1202 or 1204. Vaulting had by this time taken its place in English architecture as the natural ceiling for great churches, as it had already done in France.

Lincoln and Canterbury compared

Lincoln choir is often said to have been inspired by Canterbury. The two churches have in common the double transept, and Lincoln originally had also its apse. But though it is easy to understand that the novelty on English soil of the great work in Kent would excite a spirit of emulation and apply a stimulus to invention throughout the land, and that Lincoln would be influenced by it, still the work of S. Hugh differs so widely from Canterbury in almost every detail that they can hardly be said to be much alike. The view of Lincoln (Plate LXVI) is taken from a similar point of view to

Difference between Lincoln and Canterbury

[1] I observe that Sir G. G. Scott, Mr Pearson, and Mr Bilson are of the same opinion.

[2] The whole controversy can be read in the *Journal of the R.I.B.A.* above referred to. Mr Bond's conjectures are interesting and ingenious but they are, I think, conclusively disposed of by Mr Bilson and others.

Lincoln cathedral

that of Canterbury (Plate LXII) for purpose of comparison. The bays at Canterbury are narrow, about 14 ft. from centre to centre of the columns; those of Lincoln are about 22 ft.[1] The great arcade at Canterbury is more than half the total height of the bay; that at Lincoln much less than half. If the total height is divided as before into 32 parts the two choirs compare thus:

	Lincoln.	*Canterbury.*
Arcade	15	18
Triforium	6½	5
Clerestory	10½	9
	32	32

In width the bay at Lincoln is 9½ parts of the height, and Canterbury 6½. The columns at Canterbury are simple cylinders or polygons, those at Lincoln are clustered with detached shafts. The simple triforium of William of Sens is replaced at Lincoln by a richly shafted arcade with piercings of plate tracery in the tympanum. The wide single clerestory window of Canterbury is represented at Lincoln by a triple group of lights, with an interior arcade carried on marble shafts, which seems to be a refined version of the Norman clerestory at Winchester, Durham, Norwich, or Peterborough, where a wide and high central light opposite the window is set between two smaller and lower openings. The feature which the two choirs have most distinctly in common is the group of marble colonnettes in two tiers at the angle of the lesser transept, which is shown in both Plates LXII and LXVI, but it is difficult to see how otherwise it could have been done, and the difference in their capitals and their foliage interferes with the resemblance. For at

[1] I take these dimensions from the published plans.

Lincoln the abacus is round instead of being square as at Canterbury, and this change carries with it an entirely fresh motive in the sculpture[1]. Lincoln cathedral

With the square abacus away goes all tradition of the classic Corinthian capital, and with the round one comes in the typical English foliage which constitutes quite a The English round abacus

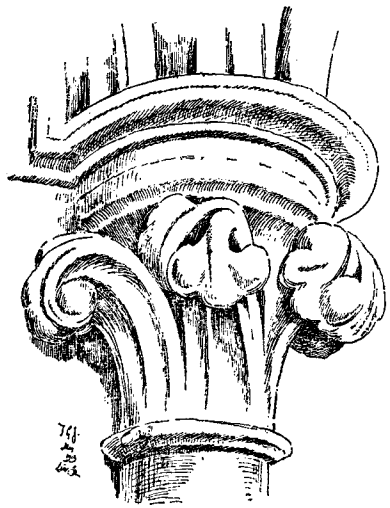


Fig. 84.

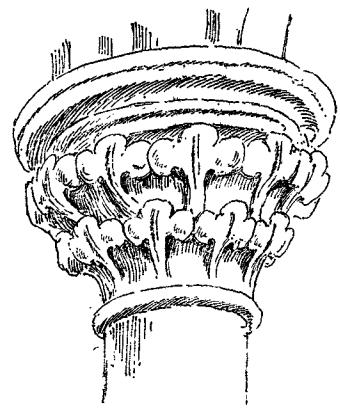


Fig. 85.

fresh departure in sculptured decoration. Figs. 84, 85, 86 show three capitals from S. Hugh's work at Lincoln, which are quite free from any trace of Romanesque influence, and are designed on quite original lines, unlike any French sculpture. Except at Bayeux, where English influence might be expected[2], I know no example of this kind of foliage across the channel. It is difficult to Early English foliage

[1] There is a much stronger resemblance between Lincoln and Holyrood than between it and Canterbury. Holyrood is illustrated in *Spring Gardens Sketch Book*, vol. I.

[2] *v. sup.* p. 144.

Early English foliage

say on what natural leaf it is based: clover, or scurvy grass, or columbine, may have given the suggestion, but it is severely abstracted and conventional, and imitates none of them exactly. With this leaf the carver played for some seventy or eighty years, producing capitals of infinite variety and consummate grace, expressing with truth by their springing upright lines below the curling knots of foliage the function of the capital as a member

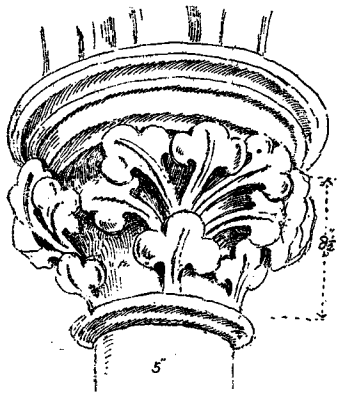


Fig. 86.

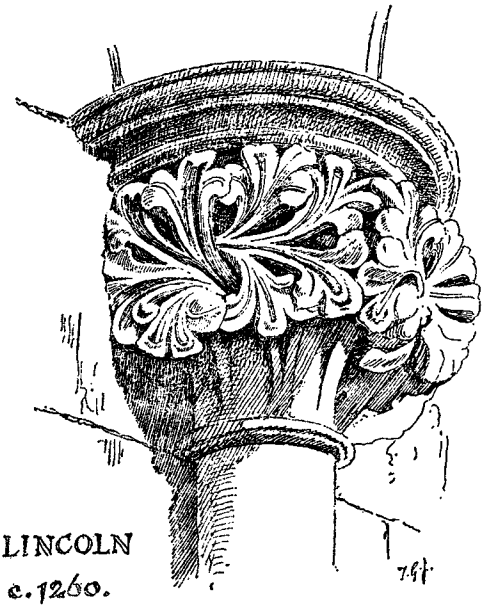


Fig. 87.

of support. Fig. 87 shows a later and more fully developed example from the presbytery at Lincoln. This model spread throughout the length and breadth of the land; it is to be found from Lincoln to S. David's, from Salisbury, Winchester and Chichester to Westminster; to Ely, where perhaps the strong springing line is rather

over-weighted by the pendant knots, and on to York. It held its own throughout the Early Gothic period till superseded by more natural foliage at the end of the 13th century, and it stands to Early English work in the same relation that the acanthus leaf does to Roman.

The Lincoln apse

If the plan of S. Hugh's vanished apse at Lincoln has been correctly recovered from the foundations (*v.* Fig. 81 *sup.*) it bore very little resemblance to that of French William at Canterbury. It had two straight raking sides of two bays each, leading to a square bay closing the east end; so forming a sort of irregular and elongated half-hexagon, a plan unlike any example known to me in France or England, where apses are set out on circular or regular polygonal lines bay by bay.

Compared with Canterbury

It is true there are two raking bays at Canterbury short of the apse, and it has been suggested that they were copied by De Noiers at Lincoln. But those at Canterbury are not part of the apse, but a good way from it, and they are caused by the desire to preserve the two Norman chapels of Conrad's choir. No such reason existed at Lincoln, and to have copied it without a reason would have been a piece of frivolous pedantry of which we may be sure De Noiers would not have been guilty.

The vaults at Lincoln

It is doubtful how far S. Hugh's work was advanced at his death in 1200. In the opinion of Sir G. G. Scott and Mr Pearson the sexpartite vaults of the east transept are his, but the choir vault with its flying buttresses, and the lower arch across the triforium chamber date from the middle of the 13th century. They were probably constructed after the fall of the central tower in 1237 or 1239, and finished before 1255. The transept vault is regular and so is that of the choir bay next the tower,

Eccentric choir vault

Lincoln cathedral

but the rest is very eccentric (Fig. 88). The plan is really quadripartite, but instead of the diagonals meeting in the middle of the crown they are drawn to separate points A and B, two superfluous ribs AC and BD are drawn from those points to the springing, and as the diagonals do not meet it is necessary to insert a ridge rib to receive them. The result is a lozenge-shaped panel laid obliquely across the bay from corner to corner, C to D, with a somewhat perplexing and disturbing effect to the eye.

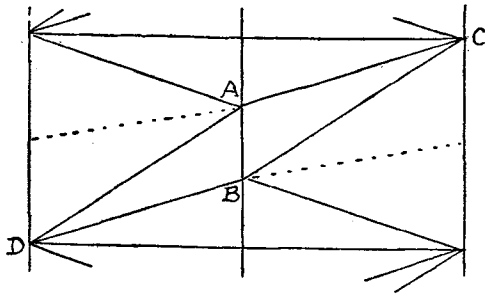


Fig. 88.

Lincoln nave

No such whimsy diverted the architect of the nave at Lincoln (Plate LXVII) who worked with a surer hand and with a magnificent result. It seems to have been begun by Bishop Hugh of Wells 1209—1235 and finished in the time of the great Bishop Grostête who died in 1253. The lightness of the structure is remarkable, and according to Mr Penrose the proportion of void to solid in the plan is greater than in any large vaulted building in Europe. The piers are clustered, surrounded by marble colonnettes, the central column being in most cases of marble as well. The bays are very wide, scaling on the published plans about 27 feet from centre to centre of the columns, which as the nave is 40 feet wide gives

LINCOLN CATHEDRAL—The Nave

an air of great spaciousness to this part of the building. The vaults are quadripartite, and have ridge ribs and extra intermediate ribs (Fig. 89) which from this time play an important part in English vaulting, and lead up, as will be explained hereafter, to a new principle of vault-construction peculiar to this country.

Lincoln cathedral The nave vault

The outside elevation of this nave is perhaps the finest example of vigorous and severe Early English work.

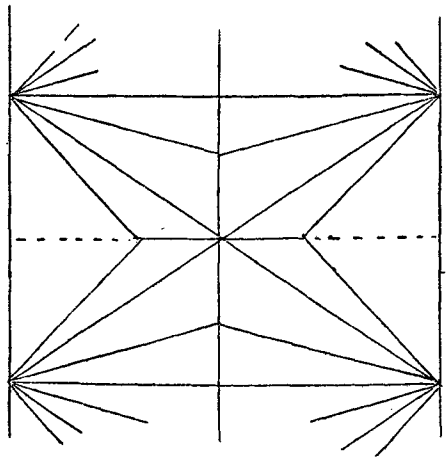


Fig. 89.

Rather before the nave of Lincoln Bishop de Lucy had built a large triple aisled retro-choir three bays long, eastwards of the choir at WINCHESTER. It is so much lower than the choir as to give room for a great east window above it in the choir gable, and the middle aisle of the three is not much higher than the other two. The ceiling is of rib and panel vaulting completely developed, and developed in a manner different from that of the French.

Winchester De Lucy's building 1204

In French vaulting the ashlar-beds of the panel are

Difference between French and English vaults

laid in courses parallel to the ridge-lines; that is to say, in the longitudinal vault they are parallel to the axis of the church, and perpendicular to the transverse arch, and in the cross vault they are parallel to the transverse section and perpendicular to the axis of the church and to the wall-rib. They thus meet at a right angle against

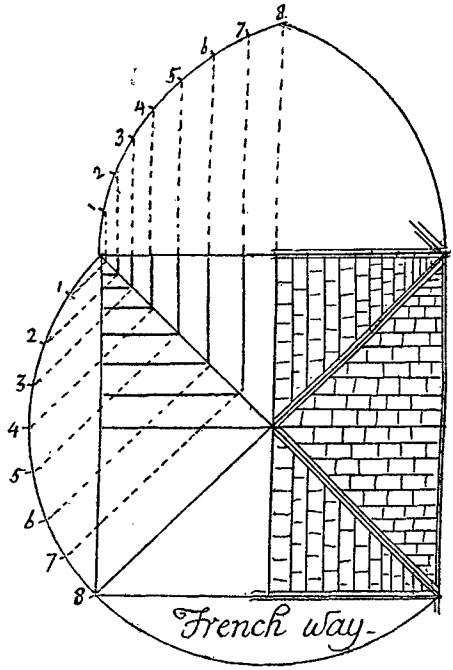


Fig. 90.

the diagonal rib (Fig. 90). In English vaulting, on the contrary, the beds of the ashlaring in the panels are laid square with a line more or less nearly bisecting the panel, and they therefore meet at an obtuse angle against the diagonal rib (Fig. 91). In setting out a French vault the transverse or the wall-rib would be divided into so many equal parts to mark the width of the ashlar

The French vault

courses, and the diagonal would be divided into the same number of parts, but these would each be longer than those on the direct arches, because the diagonal line is longer. If these divisions are projected (Fig. 90) from the elevation on to the transverse and diagonal lines in plan, lines drawn to join the points so marked will give

Difference between French and English vaults

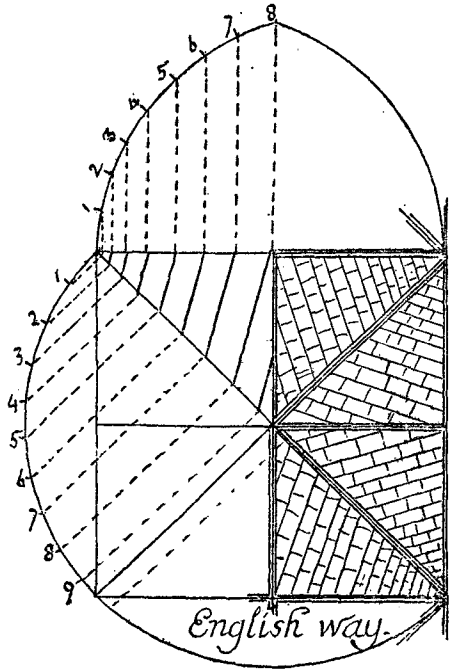


Fig. 91.

the beds of the ashlaring of the panel, which will of course be parallel to the ridge lines, because the divisions of the two arches are equal in number though not in length. On the other hand, in setting out an English vault the divisions on the diagonal are made of the same length as those on the direct arches, and therefore there will be more divisions marked on the diagonal rib

The English vault

Difference between French and English vaults

than on the others because it is longer. Consequently if the divisions are projected (Fig. 91) and the points joined in the same way as before, it will be found that the beds of the ashlaring lie obliquely and not parallel to the ridges, because the divisions are equal in length but not in number. In the French vault the direct ribs and the diagonal all receive the same number of courses; in English vaulting the diagonal receives more courses than the others. Consequently at the crown of the vault the French ashlar courses meet naturally on the same straight line, but the English meet obliquely on a serrated line. The awkwardness of this junction suggested the ridge-rib which is one of the features that distinguish English from French vaulting. In De Lucy's work at Winchester there is no salient ridge-rib but there is a straight course in the ashlar, down the middle of which runs the line of the apex of the vault. This course may itself be serrated to fit the abutting ashlar stones.

The ridge rib

One result of the English system is that the panels are commonly curved in one direction only, that following the ribs, and cannot very well be arched laterally from rib to rib, as is common in French work.

Constructive effect contrasted

The English system seems to distribute the weight more uniformly on the skeleton of ribs, for the French plan throws most of the weight on the diagonal. In theory the transverse rib might be removed from a French vault with impunity, and we should then have a continuous barrel vault into which the cross vaults would cut on a mitre-line, fortified by the diagonal rib; whereas in an English vault the transverse arch is as much required as the diagonal[1].

[1] For simplicity of explanation the vaults in Figs. 90 and 91 are shown over a square bay, and so they avoid the complications arising from stilted

In De Lucy's building at WINCHESTER the windows in each bay are a pair of lancets between,—on the outside, —two blank lancet panels, all with detached shafts in the jambs. The vaults are simple quadripartite, with moulded diagonal transverse and wall-ribs. The piers of the great arches are clustered with marble shafts, and half-clusters of marble shafts form the wall-responds. Their capitals are carved with the Early English leaf in Purbeck marble but the capitals of the window shafts are moulded, and this introduces us to another novelty which is distinctively English.

De Lucy's building Winchester 1204

Moulded capitals are of course familiar to us in Doric, both Greek and Roman, but the Gothic form is something quite new. Sir G. G. Scott suggested that it took its origin in the hardness of Purbeck marble, which did not lend itself easily to sculpture, though as a matter of fact capitals carved in Purbeck abound at Lincoln, Westminster, Winchester, and many other places. To mould the capital is really to treat it as the base was treated: and indeed the overhanging and undercut bell bears some resemblance to an Attic base inverted and elongated. The round English capital lent itself readily to moulding, which in many cases might even be turned in a lathe. The moulded capitals of the 13th and 14th centuries are very beautiful, and the refinement of their profile is comparable to Greek work. Fig. 92 shows two varieties from the triforium at Westminster Abbey. The bases are often versions of the Attic, but flattened so that the scotia becomes a sunk channel more suited

The moulded capital

The base

arches, and winding panel-surfaces over an oblong area. But though these disturb the regularity of the system, the principles of the two kinds of vaulting and their difference remain the same, and gradually lead them farther and farther apart.

to interior work, where it has an admirable effect, than to exterior where it holds water detrimentally.

End of the transition

Before the end of the 12th century architecture both in France and England had emerged from that transitional phase which we call Romanesque, and taken on itself fresh forms, which, after a period of fusion, became at the end of the period crystallized into the new style

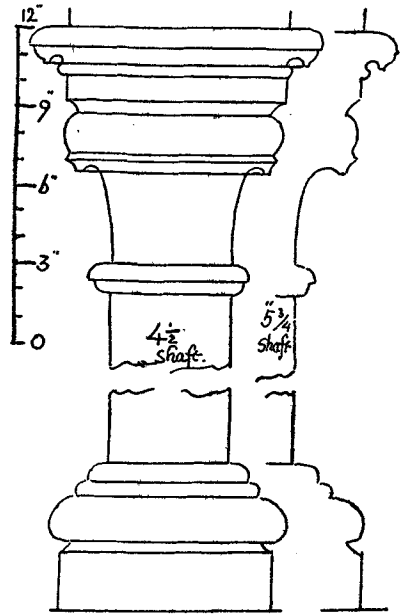


Fig. 92.

Formation of national styles

which we call Gothic. But in each country the new style had already taken a distinct national form and the two diverged constantly farther from one another. The great work at Canterbury brought into England for the second time a foreign influence, which had its effect on the art of the country: but it was not strong enough to bend the native school to the foreign type. Its effect was to

provoke to emulation rather than to imitation, and what the English architects borrowed from the French was soon assimilated and changed into an English form. Lincoln, where the influence of Canterbury is generally said to be most strongly marked, is singularly unlike the great church in Kent, as I have already pointed out, both in proportion and detail. Canterbury may have supplied the incentive to cover the central area with rib and panel vaulting, though it is said the nave had previously been vaulted by Bishop Alexander; but, except in the eastern transept which has a regular sexpartite vault, the other vaults took a line of their own, an eccentric one in the choir, and in the nave a new system of multiplying the ribs which never obtained in France, and was the beginning of a different and purely English kind of vaulting.

Viollet-le-Duc on Lincoln

Viollet-le-Duc, who visited Lincoln in 1860 or 1861, said: "I expected from what I had heard in England to find at Lincoln the French style of architecture...but after the most careful examination I could not find in any part of the Cathedral, neither in the general design, nor in any part of the system of architecture adopted, nor in the details of ornament, any trace of the French school of the twelfth century (the lay school from 1170 to 1220) so plainly characteristic of the cathedrals of Paris, Noyon, Senlis, Chartres, Sens, and even Rouen. The part of the Cathedral of Lincoln in which the influence of the French School has been supposed to be found has no resemblance to this. I speak of the choir." He goes on to say the vault construction is unlike the French, and the slender arch-moulding deeply undercut, the round abacus, the tooth-ornament, are quite unlike anything at Paris, Sens, or S. Denis. He concludes "the construction is English, the profiles of the mouldings

are English, the ornaments are English, the execution of the work belongs to the English school of workmen of the beginning of the thirteenth century[1]."

Geoffrey de Noiers architect

The architect, Geoffrey de Noiers, was claimed by the Count de Montalembert as a Burgundian, of Noyers, Noiers or Noërs in the Department of Yonne. Mr Dimock says there is another Noïers in Normandy, but claims Geoffrey as an Englishman. He mentions a Gilbert de Noiers at Boarhunt in Hants in 1216, and a Robert de Noiers, and his brother Almeric in Northants in 1199—1200, sons of a Ralph de Noiers, together with others of the same name who seem to have belonged to Norton in Northamptonshire[2]. Many families of Norman descent, that settled in England after the Conquest, kept their French names, and our architect probably belonged to one of them. Had he come directly from France his work would no doubt have been more distinctly French.

Causes of divergence of French and English styles

The early divergence of the two styles, French and English, illustrates on one hand the force of local sentiment by which the conquered population influenced their conquerors and in the end assimilated them; and on the other the strength of native craftsmanship, which though affected by the foreign fashions imposed upon it, gradually diverted them into a fresh channel, and developed a national and independent style.

Two currents of foreign influence

Twice during the 11th and 12th centuries a distinct importation of foreign architecture was brought into England. At the Conquest Norman architecture almost

[1] Viollet-le-Duc. Letter to the *Gentleman's Magazine*, 1861, Part I, p. 551, dated Paris, Ap. 15, 1861.

[2] See correspondence in the *Gentleman's Magazine* for 1861, Part I, pp. 180–674. Thierry mentions a William de Noyers, one of three Norman knights who oppressed the citizens of Norwich after the Conquest. *Hist. of Norman Conquest*, Book v.

wiped out the older Saxon art, and yet began at once to be affected by it. We see this in the balustered windows of Oxford and S. Alban's; in the square east ends of S. David's, Oxford, Romsey and S. Cross, and in the vast mono-cylindric pillars of Durham, Waltham, Gloucester, Hereford, Malvern, and Malmesbury. Again in 1174 a fresh wave of foreign influence,—French this time and not Norman,—made its way to Canterbury, where we have the double columns of Sens, the apse of Paris or Soissons, and the sculpture of S. Leu d'Esserent. But in spite of the undoubted effect of Canterbury in stimulating native English art, except at Westminster which was designed on a French model, no more French apses were built in England, for the eastern chapels of Tewkesbury and Pershore have very little resemblance to the *chevet* of Reims or Amiens.

Affected by native art

It was natural that this should be so. At first, at all events, the master-workmen—that is the real architects—would have been Normans or Frenchmen, and the direction of the work would of course be given by the great prelates, bishops and abbots, who were almost all of the conquering race. But the bulk of the workmen must have been English. It is absurd to imagine that the Normans imported from across the Channel all the masons, carpenters, plumbers, and other artificers who carried out the vast building operations which covered the land with new churches, castles, and palaces within the short space of a hundred years. They would have found no lack of artificers here: the native English were no mean craftsmen. Their great Minsters at Hexham and Ripon are praised by Norman chroniclers as wonders of architecture, that at Winchester is celebrated in an elegiac poem of 330 lines by the Monk Wolstan; their

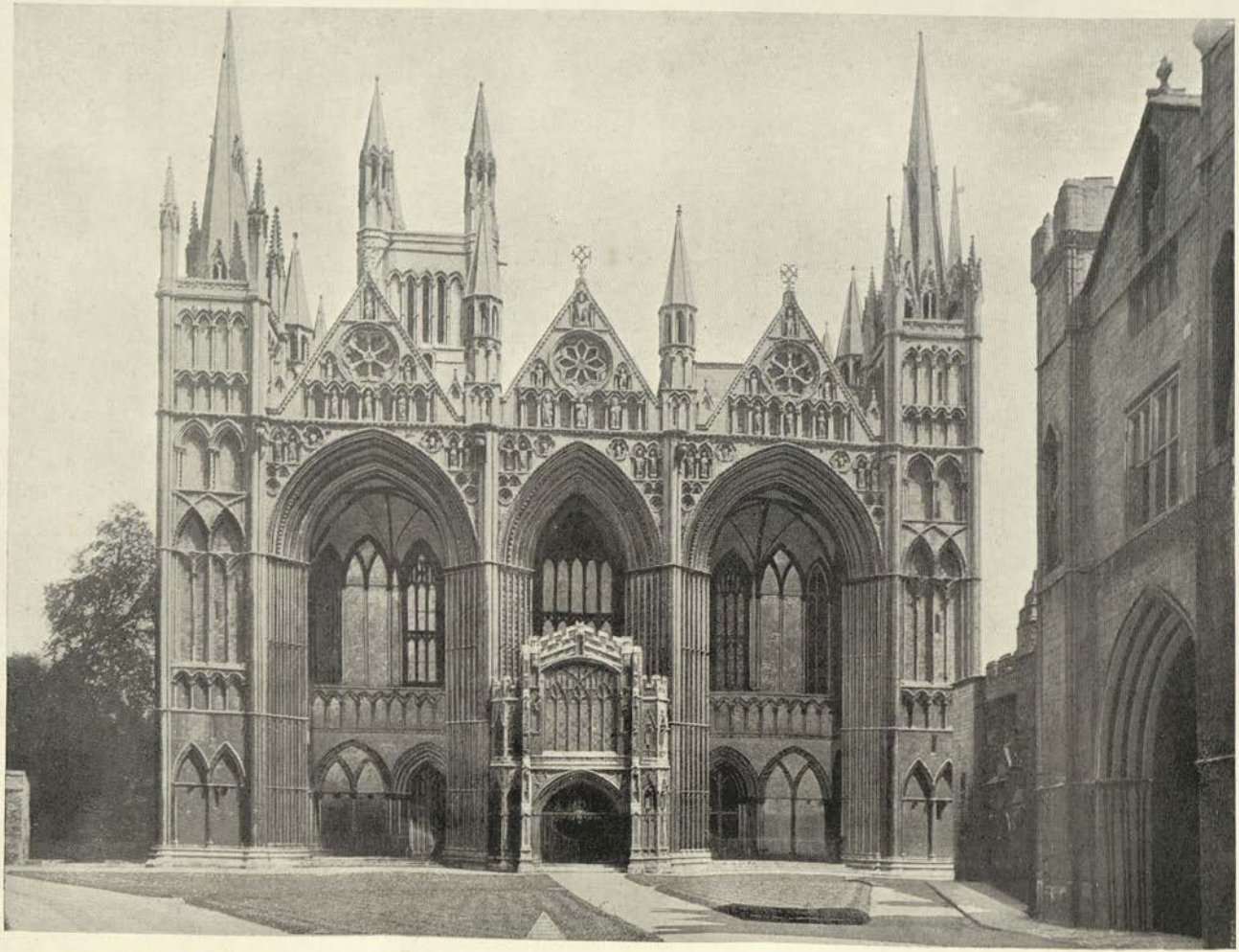
Foreign direction

Native execution

masonry was as good as that of the Normans, often much better, and we know that they surpassed their conquerors in some of the decorative arts. Consequently the Norman style in English hands soon began to change its character. This will be better understood when we remember how much larger a part in building was left to the individual workman in the Middle Ages, when there were no working drawings, when there was no professional architect sitting in his office a hundred miles away, directing the work by plan and letter, and when the master-mason—the real architect—made the design following the instructions of the bishop, lord, or abbot, by whom he was employed, but following them in his own manner, setting the building out on the ground, and directing the construction on the spot, but leaving the details in a great measure to be filled in by the artizans in each craft under his general direction.

Influence of the craftsman

Thus the Norman style in English hands soon began to take a distinctly national form, just as the Normans themselves gradually were assimilated by the native race, and from being naturalized Frenchmen became naturalized Englishmen.



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PETERBOROUGH CATHEDRAL—The West Front

CHAPTER XIII

THE EARLY ENGLISH STYLE, *continued*

At the end of the 12th century the style which we know as Early English was fully developed, and the round arch of the Roman and Romanesque periods had finally succumbed after a long struggle to the pointed arch of Gothic architecture. Only some seven years after the completion of the nave of PETERBOROUGH in the Norman style the famous west front was begun in which there are but faint traces of Romanesque. It forms a magnificent portico, which like that of a Greek temple is of the full height of the building, in front of a western transept of the same height. Over this transept were to have been two towers, of which only one was finished, and the portico itself ends on each wing in a smaller tower crowned with a spire (Plate LXVIII).

Peterborough front 1200 to 1222

The three arches are surmounted by three gables: the middle one is the nave roof prolonged, the other two run back to the towers behind them on the western transept, which has roofs gabled to north and south abutting on the return faces of the same towers.

The three gables

This façade has been accused of unreality. We are told by one writer that "the design is entirely unrelated to the building which it encloses; that the arches are equal in height, though the nave and aisles behind them

Accused of being illogical

Peterborough cathedral

are of course unequal; that the gables have not the slightest relation to the roof contours, and that the composition is as unhappy in architectural effect as illogical in its adjustment to the building[1]."

Accusation unfounded

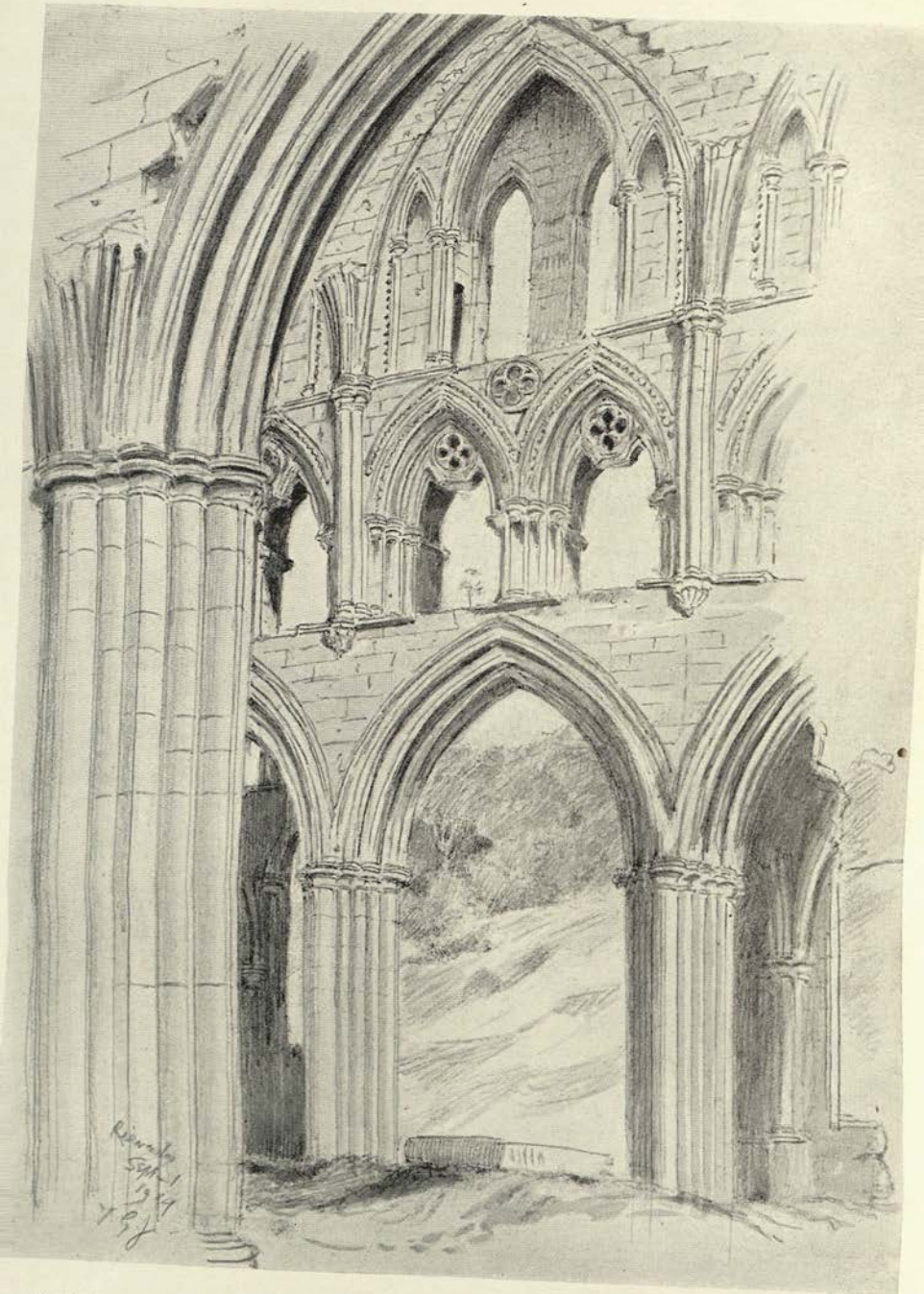
This criticism, so far as relates to the construction, seems to me singularly ill-founded. The front certainly does not correspond to the aisles—how could it?—because they do not reach it, but are intercepted by the western transept which is of the full height of the building. The three gables are obviously the natural way of roofing the three bays of the Portico; I fail to see how it could have been done otherwise. It is, of course, a matter of taste whether the whole design is unhappy or not. To most people the audacity of the conception, and its splendid breadth of light and shade, together with the richness of the many-shafted piers and the traceries and niches of the upper part will seem to place the front of Peterborough high among the triumphs of Gothic architecture where it would stand in no need of apology.

Ruskin somewhere says this façade would have been almost unrivalled had not the middle arch been narrower than the others. This criticism leaves out all consideration of the two flanking towers, and regards only the three bays between them. But I like to regard the composition as one not of three but of five parts, of which the three alternate bays are nearly equal, and are divided by two that are wider, and this, I think, is how the architect meant it to be considered. So regarded the difference in width seems reasonable enough.

Trace of Romanesque

In the rose or wheel windows of the gables, which remind one of Patrixbourne, the detached paterae of the

[1] *Development and Character of Gothic Architecture*, C. H. Moore, p. 231.



T. G. J.

RIEVAULX ABBEY—The Choir

spandrils, and the billets that run up the pediments, we may recognize a lingering trace of transitional Romanesque, and the same may be said of the two pinnacles that divide the gables, and of the rounded pilasters that form the angles of the flanking turrets; but in the shafted jambs and deeply undercut mouldings of the arch we see the new style fairly launched into independence. Peterborough cathedral

Besides the native preference for a square east end in this country which was a matter of tradition from Saxon architecture, and from Celtic buildings earlier still, another influence helped to implant it as a national characteristic. The Cistercian rule spread widely in England during the 12th century; and following the example of the parent church at Citeaux, which had a square east end[1], all the great Cistercian abbeys of England end eastwards in the same way. Kirkstall, Furness, Valle-Crucis, and Buildwas (Fig. 93), which have best preserved their original plans, have short aisleless presbyteries ending square without any eastern aisle or ambulatory. Abbey Dore and Byland (Fig. 93) have square east ends, and Byland has an eastern aisle also square. Dore has the same with the addition of chapels; but originally it ended probably like Buildwas. Netley, Rievaulx, and Tintern (Fig. 93), which are later in date, have presbyteries with two aisles all run out to the same length, ending square and without eastern aisle or chapels. Fountains ends square with an eastern transept, like that at Durham, though it is not part of the original plan. The same severe squareness of outline appears in the Cistercian transepts, which have square chapels on their eastern side instead of the apsidal

The English square east end

Cistercian preference for square end

Square transeptal chapels

[1] V.-le-Duc, *Dict. Rais.* vol. I. pp. 270–2. Cluny and Clairvaux were apsidal.

The Cistercian plan

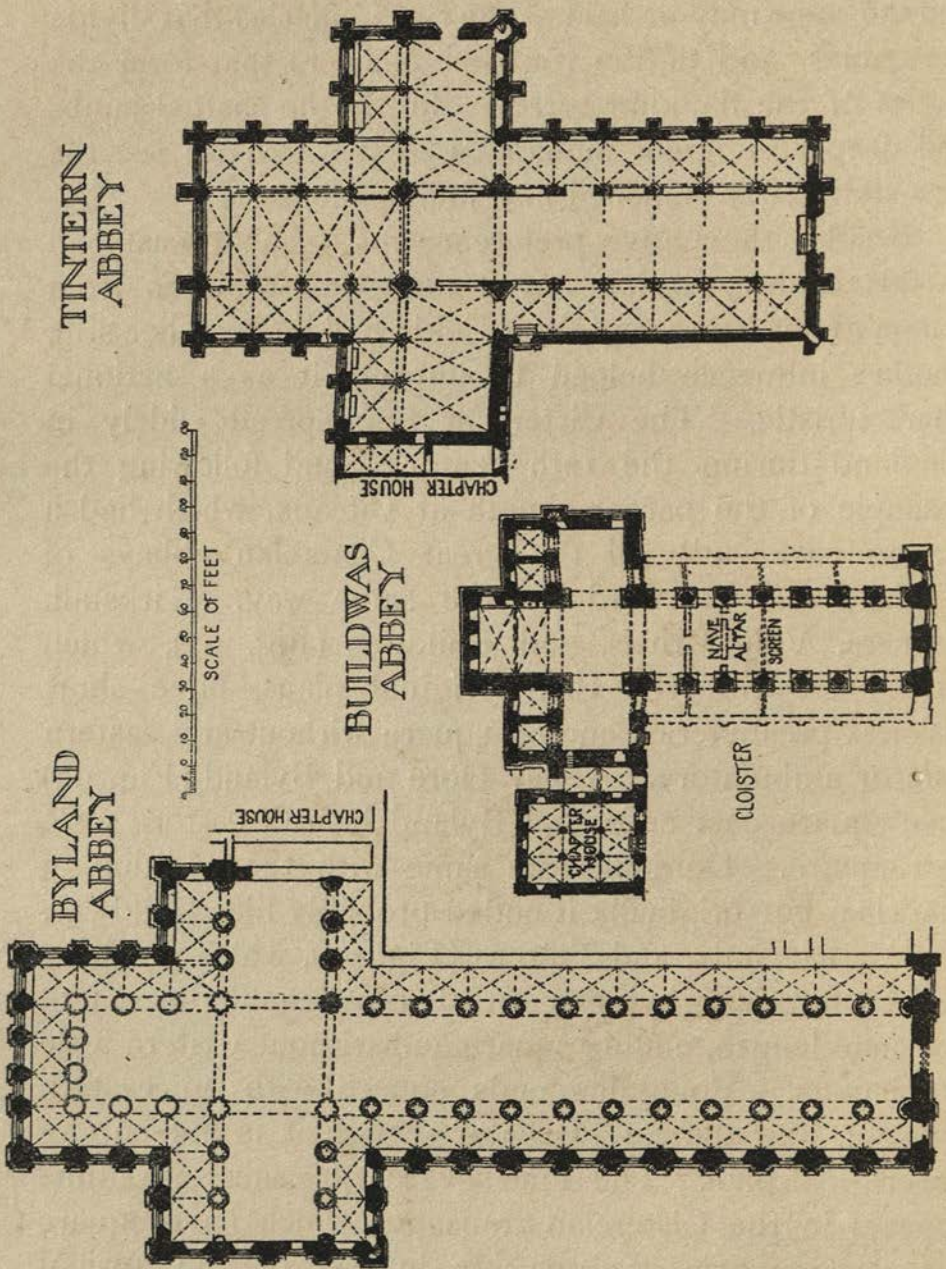


Fig. 93.

chapels of Lincoln and Christchurch[1]. A Galilee or western porch,—a sort of narthex,—was a Cistercian feature, of which there are traces at Byland, Fountains, and Rievaulx. There is one still remaining at the Cistercian church of Pontigny in Burgundy. Cistercian narthex

The strict Cistercian rule forbad all ornamental details but such as were of the most abstract form. There was to be no carving except under the most rigid restrictions. In the earlier examples, such as Buildwas and Furness, the capitals were of the fluted cushion type; and when, as at Abbey Dore and Valle-Crucis, anything further was allowed the foliage was of the severest and most conventional kind. The English moulded capital lent itself well to Cistercian requirements, and in the later churches,—Netley, Rievaulx, and Tintern,—the capitals are all of that sort. Ornament forbidden

The moulded capital

But though, like the Mussulman, the Cistercian was deprived of the resources of sculpture, and confined to purely architectural form, his artistic gifts found ample room for their display within those limits. Like the Arab he learned to trust for effect to dignity of scale, nicety of proportion, and beauty of line; and he elaborated his building with delicate mouldings, enriched them with graceful shafts, capitals of refined profile, arcadings, and in the later examples traceries of wondrous beauty. The choir of Rievaulx (Plate LXIX), begun soon after 1203, shows what may be done with pure architectural form, without the help of sculptured ornament. The result is no doubt marked by a certain dry severity: it breathes an air of harshness and coldness very different from the genial Romanesque, or the more indulgent Gothic of Cistercian independence of ornament

Rievaulx abbey

[1] Wilars de Honecort has a sketch plan which he tells us is for a Cistercian church. It has a square end. Plate XXVII. Ed. Willis.

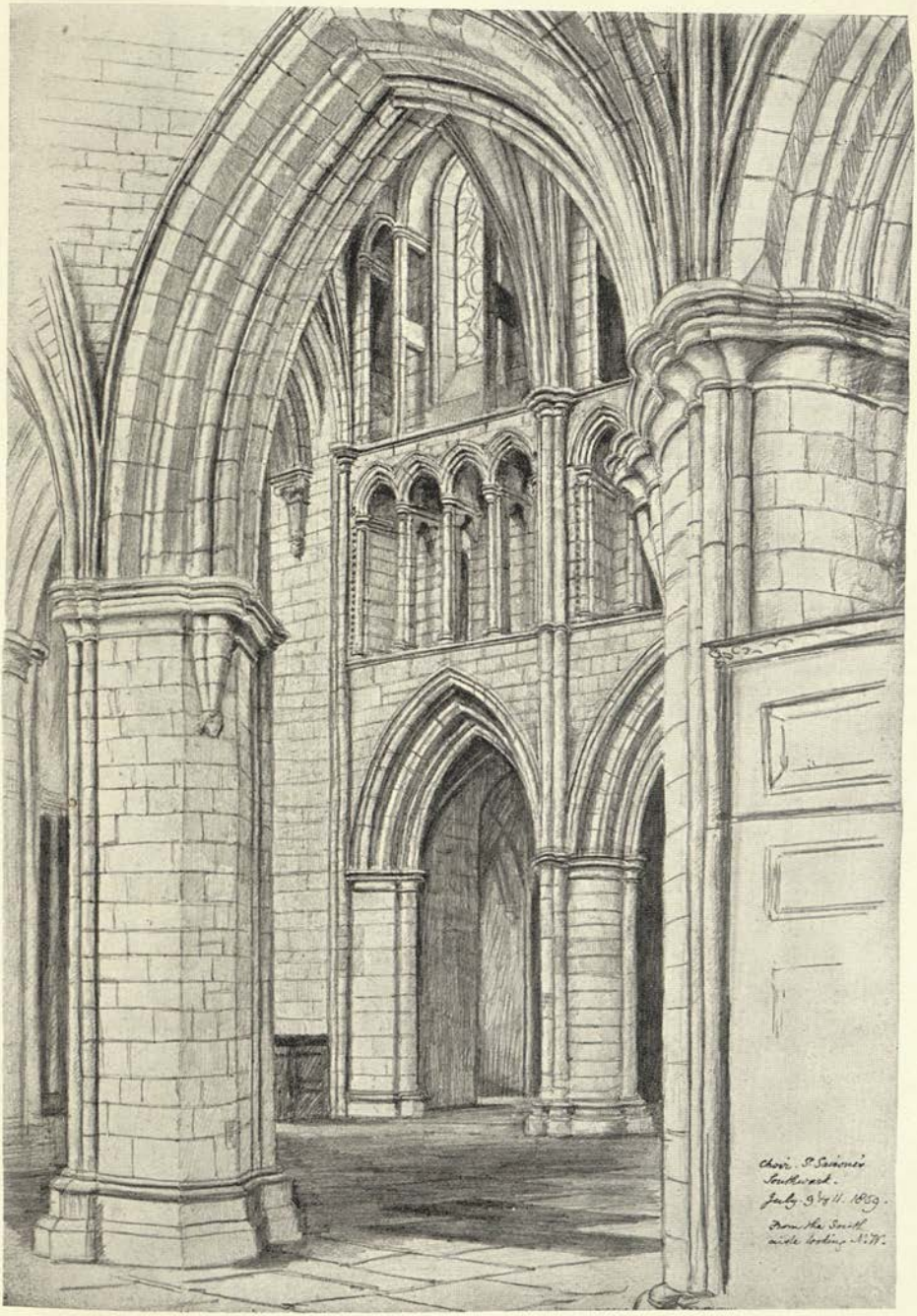
Beauty of Cistercian sites

Wells and Peterborough. But Cistercian architecture has a charm of its own, enhanced by the lovely sites in which it is generally found. The Cistercian houses were to be placed in valleys, far from the madding crowd and the haunts of men, *in locis a conversatione hominum semotis*. They are to be looked for in bosky dells, or wide-watered valleys, lying embosomed in ancient woods, beside crystal streams, where they now make the most romantic ruins in our land. Above all they teach the invaluable lesson, so much needed at the present day, that architecture does not consist in applying ornament to building, but in building beautifully, which may be done without any applied ornament whatever.

Ornament not architecture

S. Saviour's cathedral, Southwark

Nearly contemporary with the choir of Rievaulx, but rather less advanced in style is the choir of S. SAVIOUR'S cathedral, SOUTHWARK, which was built after a fire in 1213 (Plate LXX). The construction is extremely massive. The piers, alternately circular and polygonal, have clustered shafts attached to all four sides, those carrying the arcade corbelled off just below the capital, the others rising to carry the vaults of nave and aisle respectively. The articulation of the bays is well defined by these vaulting shafts. The triforium, of four equal arches to a bay, has a solid wall at back instead of being open as usual in England, and there is no passage in the thickness of the wall from bay to bay. The clerestory, like that in Lincoln choir, is a refined version of the Norman triple-arched clerestories, but it has only one lancet light instead of the three at Lincoln. All the capitals are moulded. The wall-rib of the vault is much stilted and the panel winds a great deal in order to give room for the arcade of the clerestory. The vaulting is quadri-



T. G. J. SOUTHWARK CATHEDRAL—The Choir

partite, and sustained by flying buttresses over the aisle roofs with massive piers. Southwark cathedral

Beyond the east wall of the choir, which is faced with a reredos of many storied niches like those at Winchester, Christchurch, and S. Alban's, is a retro-choir three bays long and four bays wide, one bay on each side corresponding to the aisle, and two to the choir. Four chapels originally occupied the east end. All four aisles are of one height and have quadripartite vaults, with ribs of the same section throughout, and as the ashlars are laid English fashion the conoids seem more than half-way towards the fan vaults of Gloucester[1]. This retro-choir is charming, but it is now made detestably dark by modern glass.

Contemporary with S. Saviour's is the eastern part of SOUTHWELL Cathedral which was begun by Archbishop Walter de Grey in 1215. The architect here had a lighter hand, and though the capitals of the main arcade are moulded, we have carved consoles and carved capitals for the vaulting shafts. The church being low did not admit of division into three storeys; on the inside there are but two, triforium and clerestory being both contained within a pair of lofty lancet arches. The choir at Pershore has a similar composition but with a triple arch. All the capitals at Southwell are round, and the arches have deeply undercut mouldings. The exterior has something of the acute severity of the choir at Lincoln. The vault is quadripartite with a ridge rib, but the eastern bay both in choir and aisles is quinque- Southwell cathedral

[1] These vaults as well as those of the choir were, I believe, reset by Mr Gwilt about 1825. But it may be assumed that they have accurately followed the old plan. I remember my master, Sir Gilbert Scott, saying that Mr Gwilt took the greatest pains to keep the original design.

Southwell cathedral

partite, having a central groin springing from the middle pier of the eastern group of four lancets, to meet the ridge rib. Quinquepartite vaults occur also in the choir aisles at Lincoln, and in the beautiful sacristy of Chichester cathedral. In earlier work we have the same feature at the east end of the Church of the Hospital of S. Cross in Hampshire.

Worcester cathedral

In 1201 Bishop Wulfstan, who had been dead a hundred and six years, suddenly began to work miracles and attract pilgrims to his cathedral at WORCESTER, and he was promptly canonized. Many wonders are recorded in 1220 and 1221 and the monks with equal promptitude set to work to pull down the whole eastern limb of Wulfstan's church in order to build it larger, keeping only the beautiful crypt which still remains. The new work was begun in 1224[1]. All arches are pointed and well moulded: the original windows were simple lancets, those in the clerestory in groups of three lights of which the middle one is the highest (Fig. 94). The triforium has two arches in each bay, each subdivided by a colonnette into two lights, and instead of being open backwards to the roof space as is usual in England it has a solid back to a passage in the thickness of the wall, decorated with arcading and with a small doorway to the roof space over the aisle. At Southwark also, as I have said, the triforium is closed by a back wall, but there is no passage in the wall. At Worcester the clerestory also has a passage in the wall which has a total thickness of 5 feet. The vault is quadripartite with transverse diagonal and wall ribs, and a longitudinal ridge rib with bosses but no ridge rib to the cross-vaults. The latter rise considerably from the wall to the centre, the wall-rib

[1] Prof. Willis, *Archaeological Journal*, vol. XX.

Worcester cathedral

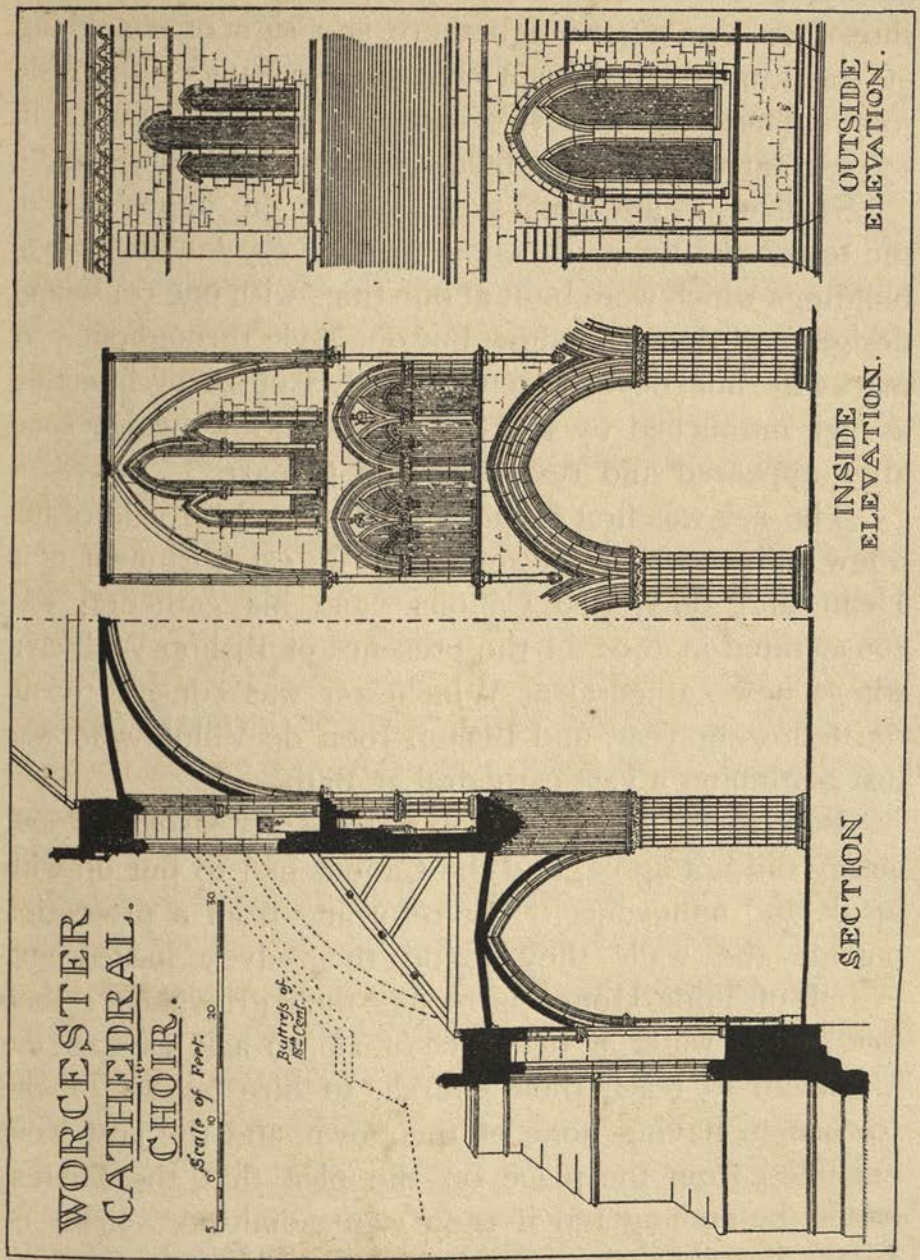


Fig. 94.

Worcester cathedral

being lower than the transverse. There were originally no flying buttresses, but only the shallow flat buttress shown on Fig. 94, though there is a sign of something of the kind having been contemplated under the aisle roof. There are now two massive buttresses, put up in 1712, to arrest a serious bulging of the clerestory wall.

Salisbury cathedral

SALISBURY cathedral, setting aside the upper part of the tower and the spire, is one of the very few mediaeval buildings which were built at one time, with one consistent design, and therefore show but one style throughout. It marks the final development of Early English architecture as yet untouched by the traceried window, which soon after appeared and revolutionized the art.

Old Sarum

The see was first founded by Osmund on a lofty hill a few miles away at Sarum, with an establishment of a Dean and thirty-two Canons: and his cathedral was consecrated in 1092 in the presence of Bishop Walkelyn whose new cathedral at Winchester was consecrated in the following year, and Bishop John de Villula who was just beginning a vast cathedral at Bath.

But Sarum was a royal fortress; the soldiers and clergy did not agree, and the Canons had to put up with insult and annoyance. On returning from a procession outside the walls they found themselves locked out. A bull of Pope Honorius recites their grievances: they had to buy water at the price of ale, to ask leave of the Castellan to reach their church, to hire houses of the townsmen having none of their own, and the laity were excluded from the place on the plea that the fortress would be endangered if they were admitted. Peter de Blois describes the site as barren, dry and solitary, exposed to the rage of winds; and the church as a captive, like the ark of God shut up in the profane house

of Baal. "Let us in God's name," he continues, "descend into the level. There are rich champain fields and fertile vallies, abounding in the fruits of the earth, and profusely watered with the living stream." Salisbury cathedral

Accordingly, in the time of Richard I, Bishop Herbert Poore fixed on a site in a pleasant valley called Merryfield[1], and in 1220 his brother and successor Richard laid the first stone of the present cathedral of Salisbury. The superintendence of the work was entrusted to Elias de Derham, into whose charge the bishop placed the funds for "in him he reposed the greatest confidence": and Leland has preserved the name of Robert, the mason who was employed for 20 years, and who would be the real architect[2]. The new cathedral

The plan is symmetrical and regular (Fig. 95), for the architect was not controlled like French William at Canterbury by consideration for older buildings to which his work was to be joined. He had a clear site, and perfect freedom of design, and he has therefore been able to show us in perfection what in his time was the mediaeval conception of a cathedral. On the other hand there is none of that variety which invests many of our great churches with a charm of their own. Their picturesqueness is accidental, not designed, for no one can design an accident. When the Romans laid out a new town, or Edward I built a Bastide, of course all the streets were straight, uniform in width, and at right angles: the crooked and irregular streets of London, Canterbury, The symmetrical plan

[1] In quodam fundo, ubi nunc fundata est, ex antiquo nomine Miryfelde. Leland's *Itin.* The seat of Nicolas Wadham at Ilton, founder of the college that bears his name, was called Merifield. The word is said to mean "the boundary field of the manor." Batten's *South Somerset.* "Mere" or "Mear" is a boundary, or landmark—*New Eng. Dict.*

[2] Cited Dodsworth's *Salisbury Cathedral.*

Salisbury cathedral

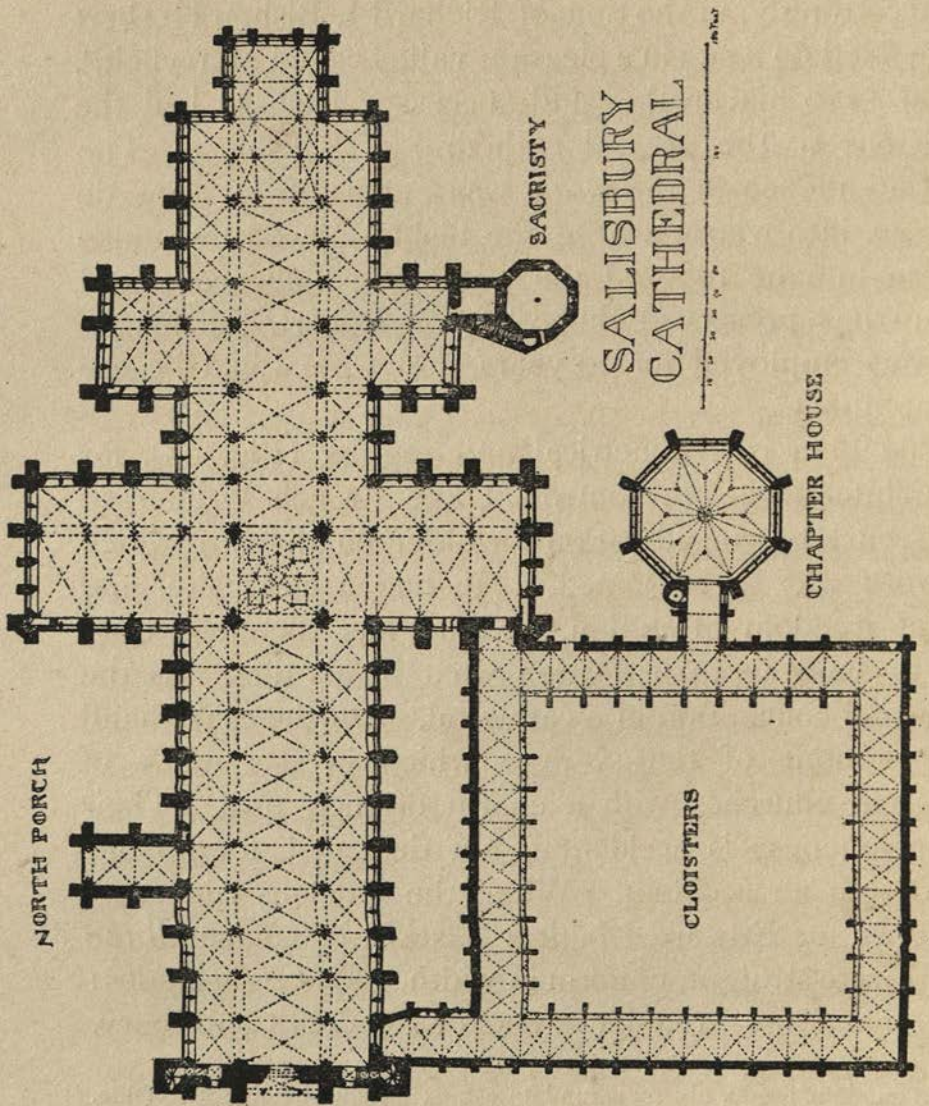


Fig. 95 (*from* Dodsworth).

or Norwich result from accident or individual fancy. And so the architect of Salisbury cathedral having a clear field before him has given us a regular and symmetrical plan, there being nothing to make it otherwise. Salisbury cathedral

As at Wells and Winchester the high roofs end with the choir proper, beyond which at a lower level chapels extend eastward; and there are the two transepts which form a characteristic feature of great English churches. In France they occurred at the abbey of Cluny, and they remain at the church of S. Quentin[1]. The second transept at Canterbury existed in the choir of Conrad before the time of French William. Besides Salisbury and Canterbury the second transept is to be found at Hereford, Lincoln, Rochester, Beverley, Worcester, and in a modified form at York, Southwell, and Wells. Ely and Peterborough have a second transept at the west end, and Durham and Fountains at the east. The far greater proportional length of our English churches, compared with those abroad, invited this second interruption of what would otherwise have been a monotonous mass. Moreover in those churches which were divided between clergy and laity the second transept converted the eastern part into a complete transeptal church, independent of the rest. The second transept

The proportions of the three storeys at Salisbury are nearer those of Lincoln than those of Canterbury, with which indeed Salisbury has nothing to do. Dividing the elevation as before into 32 parts, the arcade has about $16\frac{3}{4}$,

[1] Professor Willis (*Archaeolog. Journal*, vol. XX. p. 84) mentions another instance: "on the Continent the only known examples of this feature are S. Benoit sur Loire (*c.* 1080) and Cluny (*c.* 1089), the former of which was doubtless the prototype of the English examples." Neither he nor Viollet-le-Duc mention S. Quentin.

Salisbury cathedral

the triforium 6, and the clerestory about 9¼. The interior (Plate LXXI) is lit by immense single lights, less acutely pointed than the lancets of the north, varying from 4 or 5 ft. to 6 ft. in width. No church is more generously lighted, but the glare was tempered by admirable grisaille glass of which notable examples remain. Built on a vast scale and with excellent stone, and carefully finished within and without, Salisbury shows the high-water mark of the fully developed Early English style. There is indeed in the body of the church but little sculptured ornament, and the effect is produced by delicate mouldings in arch and capital, but otherwise all the resources of architecture were exhausted upon it, and there was nothing left for after ages to do but the mighty central tower and spire, for which the substructure was never intended, and which has sorely tried the fabric. Purbeck marble is lavishly employed, almost too lavishly,—its use almost amounts to an abuse. The dark marble shafts of the triforium do not show well against the dark background, and in the Lady Chapel the rigidity of the material is exhibited almost painfully in the extreme attenuation of the columns that carry the vaults.

The Lady chapel

The chapel is four bays in length, and is divided into a nave with narrow aisles. The two easternmost pair of columns are of Purbeck marble about 11 inches in diameter. The westernmost pair consist each of five detached Purbeck shafts only 5½ inches in diameter, standing on a common base, rising to a great height and jointed halfway up, where they are united by a bronze socketted band. Their stability rests on the accuracy of their setting, for the least movement out of the upright, by bringing the load on one edge of the shaft, would mean ruin. They stand, however, perfectly.

SALISBURY CATHEDRAL

SALISBURY CATHEDRAL

Salisbury cathedral Columns in transept and nave

Master Robert was enamoured of detached shafts. In the transept the columns are of stone, and consist of four substantial shafts grouped closely together but not touching. In the nave the columns are of stone with detached shafts of Purbeck on four sides (Fig. 75, p. 186 *sup.*). The effect of these is very satisfactory.

The vaulting throughout is quadripartite, the ribs springing from short clustered shafts bracketted out from the spandril of the triforium. Concealed below the aisle roof is a regular series of flying buttresses abutting too low to be of much use. The architect relied on his substantial clerestory wall, which is nearly 6 feet thick like those in the earlier buildings. A few flying buttresses were added later, especially near the tower; but with that exception there are none apparent above the aisle roofs, the clerestory bays being divided by shallow external buttresses not more pronounced than in Norman work, or in the nave of Wells which is similarly constructed.

The weakest part of the interior is the triforium which instead of having two distinct window openings as at Lincoln has a single opening of four lights grouped in pairs under sub-arches and enclosed by an upper arch as wide as the bay. The height being not enough for a full arch, all these arches are depressed into segmental curves with a distressing effect, the ugliness of which is not compensated by the splendour of moulding and marble shafts with which they are adorned. The shields over the heads of the lights in this triforium are pierced with a simple kind of plate tracery, foretelling what was to come.

The porch

The north porch is a magnificent piece of work. It is very lofty, and the sides are beautifully arcaded and lined with shafts carrying plate tracery (Fig. 96).

General effect of Salisbury cathedral

There is about Salisbury a monotony, and a rather cast iron severity at first repellent, but it grows on the imagination the better it is known. The composition of the exterior, with its broken outline and varied elevation, leading up to the glorious central steeple is perhaps without a rival: there is certainly no cathedral abroad that makes so complete and perfect a picture, finished so fully in every detail, so well massed and composed (Plate LXXII).

The front

The west front, which is rather later than the nave, is the least satisfactory part of the exterior. The criticism aimed at the front of Peterborough applies with more truth here, for there is no western transept to account for the lofty flat façade between two flanking towers. Irrespective of that, the high-shouldered effect of the screen-wall is disagreeable and the ornament is too evenly spread over the whole surface.

Wells cathedral front

Far more satisfactory is the front of WELLS (Plate LXXIII), which is very like it in detail, but much better in general design. Built by Bishop Jocelin, perhaps included in the consecration of 1239, at all events probably finished before his death in 1242, it is in a style entirely different from the nave. "The west front," says Freeman, "is built in that form of Early Gothic which is common in other parts of England, the style of Ely, Lincoln, and Salisbury. The rest of the early work is built in a style which in England is almost peculiar to Somersetshire, South Wales, and the neighbouring counties, and which is much more like French work[1]." There is evidence that the western bays of the nave were also built by Jocelin; but as they,

[1] *The Cathedral Church of Wells*, E. A. Freeman. But the only thing about it that seems to me like French work is the square abacus.

Salisbury cathedral

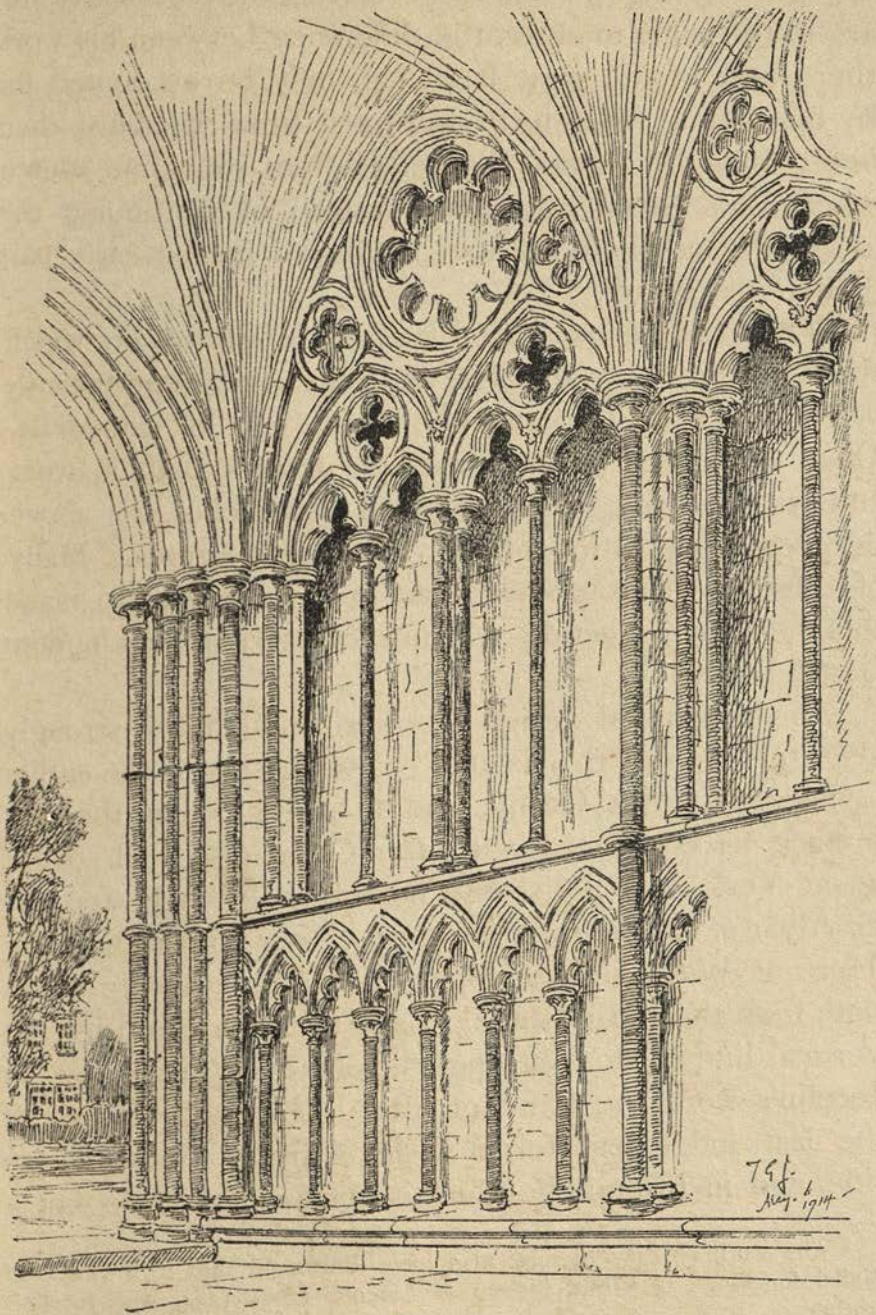


Fig. 96.

Wells cathedral

though differing in some respects from the parts eastward, are in the same manner, the difference between his work there and in the west front can only be accounted for by his having brought in workmen from Salisbury, then being built by Bishop Poore, or from the same source whence his friend got them, instead of continuing the local masons whom he had employed in the early part of his episcopate[1].

The façade is expanded laterally by the towers which stand out beyond the aisles, and thus give a fine breadth of front to what is really one of our smaller cathedrals.

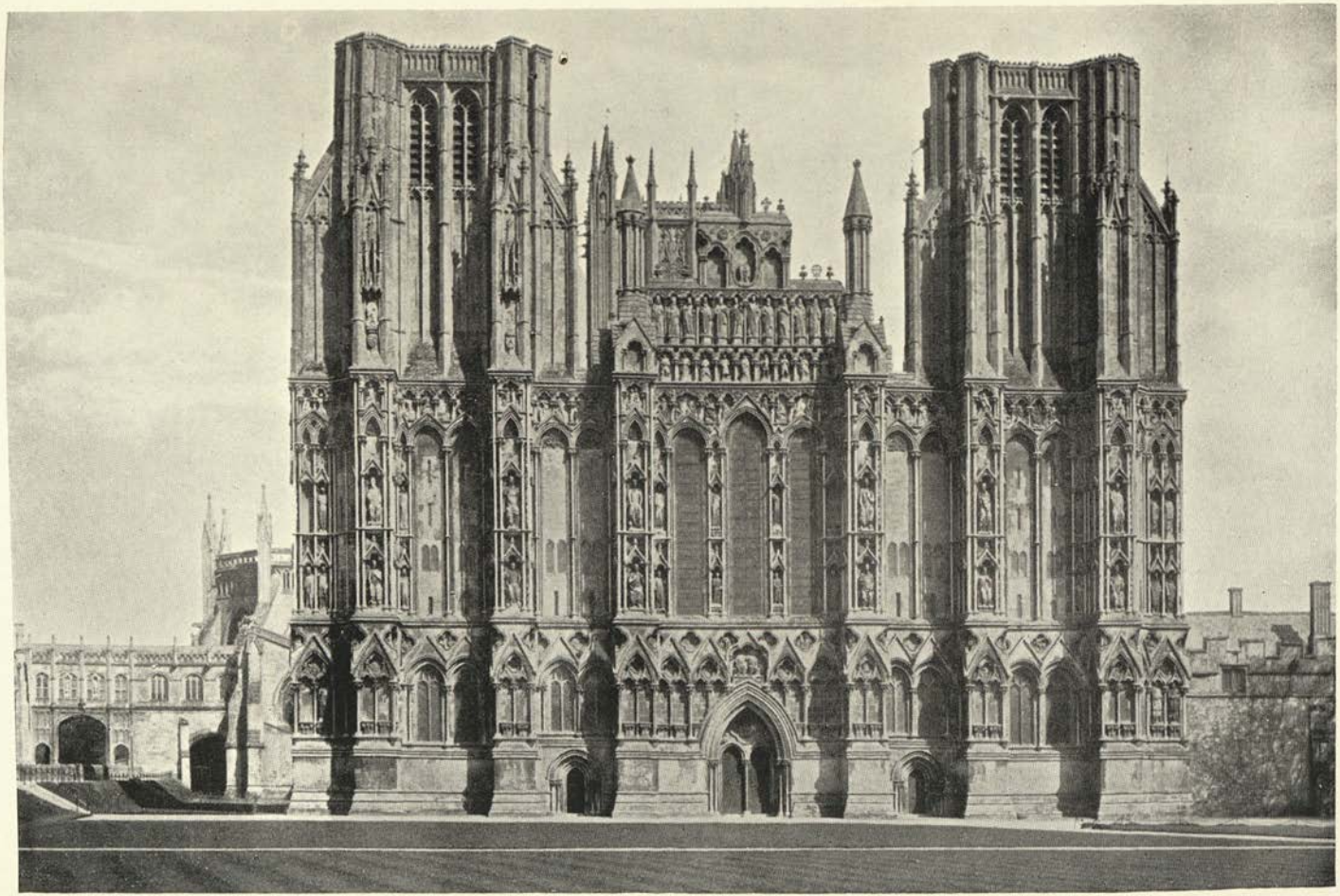
The statuary

Deep buttresses project from the towers both in front and at their sides, which are filled with niches, tier above tier, for a population of more than 300 figures. Many of these have disappeared but enough remain to make this the finest collection of figure sculpture in the kingdom (Plate LXXIV).

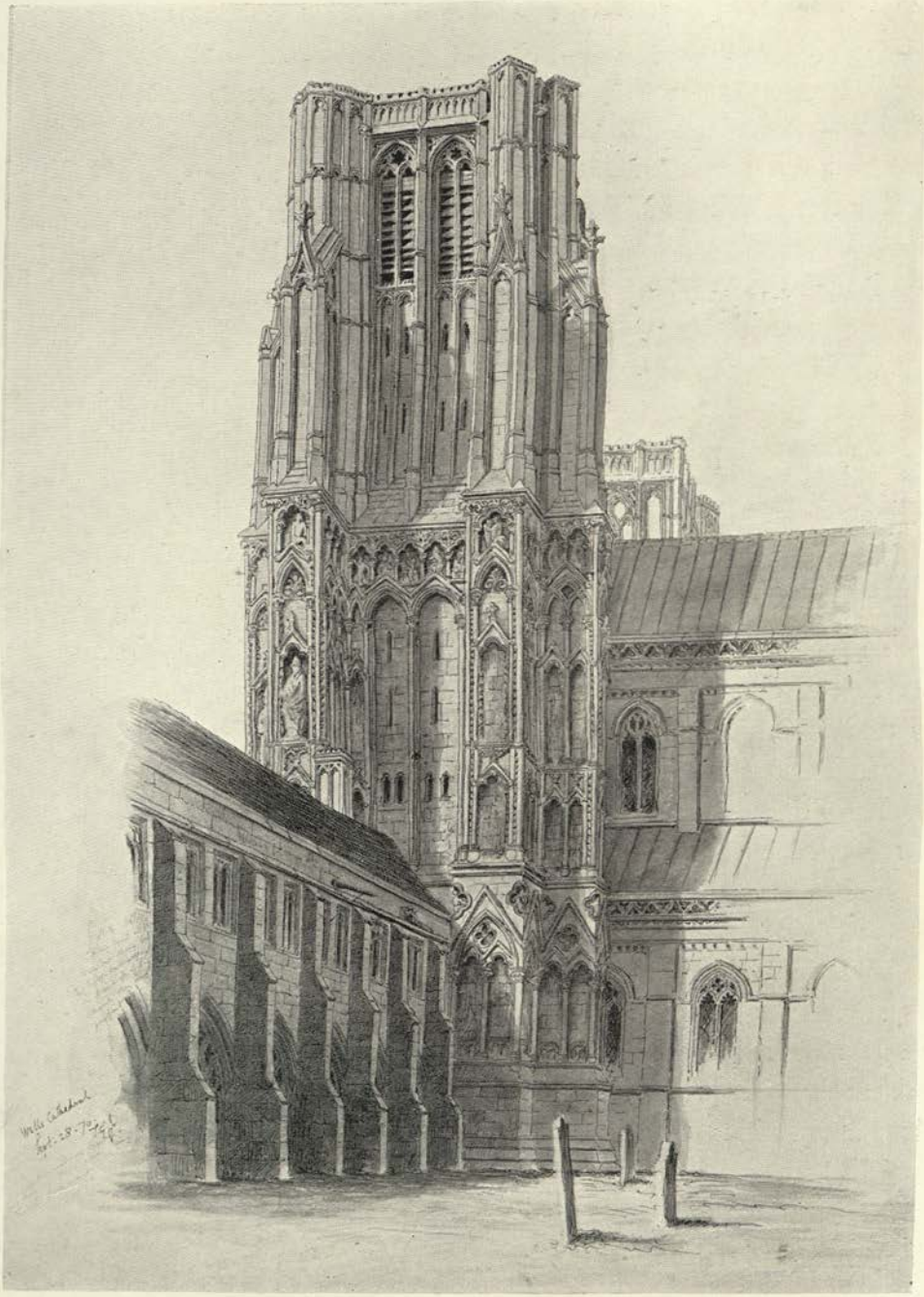
Horizontal line emphasized

In the general design the horizontal line is strongly accentuated, and this is one characteristic of the earlier styles of English Gothic and to some extent those of France as contrasted with the German school. It is so at York, and Salisbury, notably at Winchester and S. Alban's, and indeed in most of our great churches. Here at Wells, in the upper part of the towers which date from the end of the 14th and the 15th centuries, the vertical line is more strongly expressed; but below, in Jocelin's work the band of little niches with figures of the last judgement forms a level freize from side to side, and in the middle there is not even a gable, but a

[1] The work at Lincoln may also have influenced that in the front of Wells, for Hugh of Wells, bishop of Lincoln 1209—1234, was Jocelin's brother.



WELLS CATHEDRAL



T. G. J. WELLS CATHEDRAL—View from Cloister

composition of niches in several storeys finishing square at top. Wells cathedral

Both at Wells and Salisbury the doors form a very insignificant feature in the design of the façade. During the Gothic period a great west portal never formed part of the architect's scheme in England as it did in France, where the utmost resources of the art were lavished upon it. In the earlier churches of the Norman style more was made of it than afterwards: in Remigius's cathedral at Lincoln, and in many smaller churches such as Castle Rising and Iffley, the west doors were treated with dignity: but the main entrance was usually by a side door with a porch, and the west door was seldom used[1]. Even in the Norman time it was so: most of the fine Norman doors of our village churches are at the side and in many cases there is no door at all at the west end. Durham had originally fine western doorways, but they were masked as early as the 12th century by the Galilee. At Wells, Salisbury, Christchurch, Worcester, Gloucester, and Canterbury the side door is the principal entrance, and is preceded by a beautiful porch which is one of the most important features of the exterior. The most splendid Norman porch and doorway in the kingdom are at Malmesbury, and they are on the south side of the church. Westminster alone has a great portal in the French fashion, but it is at the transept and not at the west end, and the most beautiful entrances at Lincoln are by the Galilee attached to the south transept and by

The English portal

The English side door and porch

[1] Our English climate had no doubt a good deal to do with it. There is truth in Lord Grimthorpe's humorous if ungrammatical remark, "although a west tower door is very common, and looks well outside, there is no denying that it is practically almost a nuisance, and is generally disused, from allowing the wind to blow straight into the church, and therefore it is no use to build them so." (*A book on building*, p. 255. Weale's Series.)

the magnificent south door of the presbytery. Peterborough alone by its splendid portico emphasizes the western approach in a worthy manner.

German side doors

The same preference for a side entrance, and the same or even greater neglect of the west approach is characteristic of German churches even in the Romanesque time.

Ely Galilee porch

ELY has a fine west entrance, though still on a moderate scale, erected by Bishop Eustace between 1197 and 1220 together with a western porch or Galilee in front of it of remarkable beauty. The side walls are arcaded in two storeys of which the lower is recessed with two planes of arches joined by a narrow vault.

S. Alban's porch

S. Alban's has a beautiful western porch very like this at Ely and of the same date.

Ely presbytery

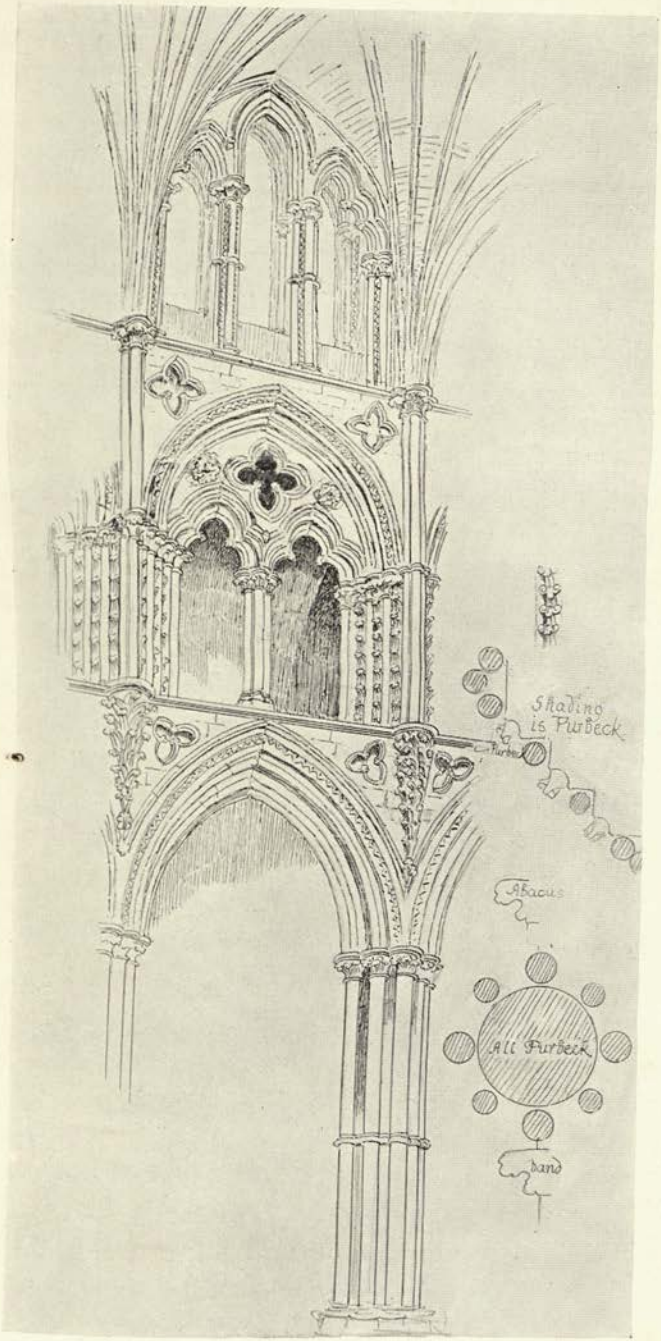
In S. Etheldreda, or Audrey, Ely had a popular saint, whose shrine was much frequented by pilgrims, for whose accommodation more space was wanted, and in the 13th century a great eastward extension was made, as was done also for a similar reason at Canterbury, Worcester, Winchester, and Durham.

The Norman apse

The Norman choir at Ely seems to have finished eastward with a simple semi-circular apse, having no circumambient ambulatory like that built by Abbot Simeon's brother at Winchester[1]. This Norman east end was pulled down by Bishop Northwold, and between 1235 and 1251 the present presbytery was built which is perhaps the most splendid example of pure Early English work in the kingdom. Unlike Winchester and Salisbury, where the eastern parts are at a lower level, the roof is carried

Ely presbytery

[1] Curiously enough the foundations, which have been explored, seem to show that at some time after the semi-circle had been built the east end was altered to a square.



T. G. J. ELY CATHEDRAL—The Presbytery

Ely cathedral. The presbytery

of its full height to the extreme east end, where it finishes with a magnificent composition of three huge single lights below, surmounted by five lights above, rising to the centre, and three lights higher still to illumine the roof space, set between two blank arches. The flanking buttresses have niches as at Wells but have lost their figures.

It would be difficult to overpraise the interior of this lovely presbytery. It is much more satisfactory than that of Salisbury. Here sculpture comes to the aid of architecture, and though a generous use is made of Purbeck marble it is employed with much greater judgement (Plate LXXV). The main columns are cylinders of this material surrounded by four larger and four smaller colonnettes of the same, attached to the main shaft by moulded bands. The capitals are well carved with Early English foliage, the arches are richly moulded in several orders of which the outer is enriched with dog-teeth. The triforium has two trefoiled lights under an including arch with rosettes and plate tracery in the shield, the jambs being deeply splayed and set thick with Purbeck shafts, between which vigorous crockets of Early English foliage sprout forward. The clerestory has three lancet lights with a passage in the wall, and an inner arcade of three arches on Purbeck shafts, the middle one the highest, the others cusped in the outer sweep of their arch. The vault is of the English type now fully developed, with level crown, ridge ribs, and intermediates. It springs from wall shafts of Purbeck, rising from beautifully carved consoles of the same marble in the spandrils of the main arcade. The ashlar of the vaulting panels is laid English fashion, and there are regular flying buttresses exposed outside.

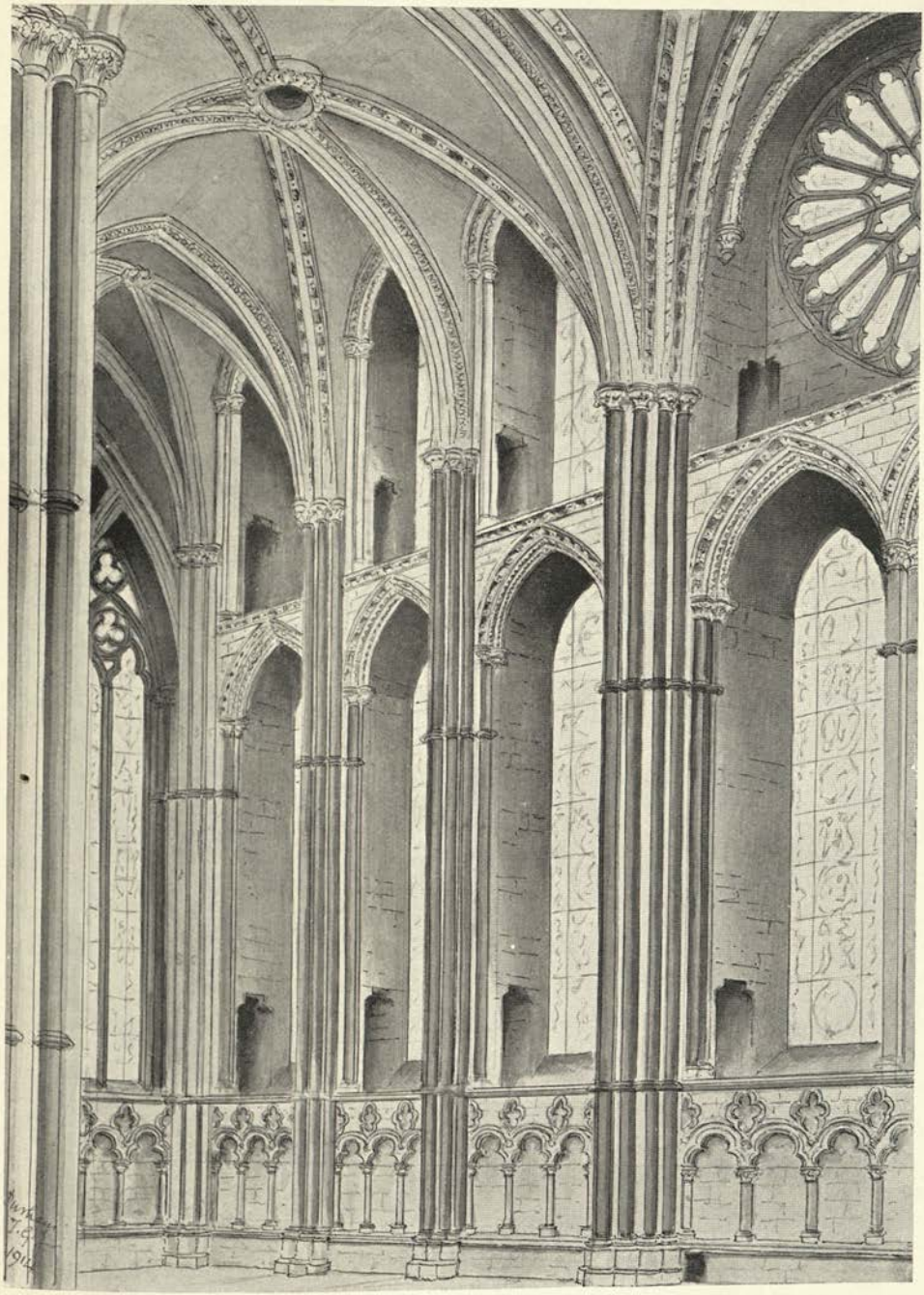
Durham Chapel of nine altars

The cult of S. Cuthbert at DURHAM demanded a similar eastward extension to contain the shrine of the saint and accommodate the crowd of pilgrims. The nature of the site forbad any long addition eastwards, and the new building took the form of an eastern transept, the chapel of nine altars, like that completed just before at Fountains Abbey. The east wall is sustained by four enormous buttresses with two smaller between each pair, on which the vaulting ribs converge. Two tiers of windows fill the intervals, each with a passage in the wall, an air of tremendous strength being given by their plain square cut jambs, and the severity of the great lancet lights. A rich wall-arcade runs round below the window cills, against which on the east wall stood the nine altars (Plate LXXVI).

The work was begun in 1243, five years after the death of Bishop Richard Poore, the builder of Salisbury cathedral, who had been translated to Durham in 1229, and though not started in his lifetime the project was no doubt due to him. As it was not finished till 1280 this chapel of the nine altars is the last, as it is also in its way the grandest example on a large scale of the Early English style, which before its completion had already begun to pass into geometrical Gothic. The new addition involved the removal of S. Carilef's apse, and the reconstruction of the choir vault which is described in Prior Melsanby's appeal as ruinous and dangerous[1]. A piece of good fortune has preserved the architect's name: a conveyance of a piece of land in the Bailey is witnessed by "*Magister Ricardus de Farinham, tunc architector novae fabricae Dunelm*," and a stone on a buttress at the east end is inscribed with the name of

The architect

[1] *v. sup.* p. 185, note.



T. G. J. DURHAM—The Eastern Transept

a mason, *Posuit hanc petram Thomas Moises.* Nicolas de Farnham was bishop of Durham from 1241 to 1249, and the architect, as Canon Greenwell suggests, may have been his brother[1]. The great round window filling the middle bay in the upper part is the work of Wyatt: Canon Greenwell says it replaced in 1795 not the original window but one put there in the 15th century. At the north end is a fine geometrical traceried window apparently an early alteration from the lancet window design of the original architect. But we must leave tracery to be dealt with in another chapter. Durham cathedral

The vaulting is peculiar. It springs from clustered shafts, some of which are of marble, and the ribs impinge on circular eyes or rings which are beautifully carved. The general construction is a kind of quadripartite, but an eccentric rib cuts irregularly across the two side bays very awkwardly.

In this splendid chapel, as also in Lincoln, Ripon, Hexham, and the Yorkshire abbeys, and farther still at Glasgow and Elgin one finds a different feeling from the contemporary early English of the South. There is a sharpness here and a vigour in the acute lancet heads, the narrower lights, the more trenchant mouldings, and the bolder forms which contrasts with the more elegant grace of Ely and the fronts of Peterborough and Wells. Even Salisbury, in spite of its avoidance of sculptured ornament and a certain hardness in its sharp undercut details, breathes a gentler air in her wider lights and her less sharply pointed lancets. Peculiarities of Northern school

At YORK cathedral the Early English style is confined to the transept, north and south, which was built in the time of Archbishop Walter Grey (1215—1255) who lies York cathedral transepts

[1] W. Greenwell, *Durham Cathedral*, p. 58, 5th ed.

York cathedral transept

buried in the eastern aisle of the south transept in the chapel of S. Michael. His tomb may challenge comparison with those of Bishop Bridport at Salisbury and Aymer de Valence at Westminster, as one of the most beautiful monuments in Gothic architecture.

The south transept was finished in 1241; the north transept was built and in 1247 finished by John le Romain, canon and treasurer from 1250 to 1260, a Roman whose son afterwards succeeded to the archbishopric. The well-known group of the "five-sisters" needs no description. In spite of many beauties, however, the proportions of the three storeys in these transepts is not agreeable. Dividing the elevation into 32 parts as in former cases they are apportioned as follows:—

Arcade,	roughly	$16\frac{1}{2}$ parts
Triforium,	„	$9\frac{1}{2}$ „
Clerestory,	„	6 „
		32

The triforium

The triforium is too large and reduces the clerestory to insignificance. The design very closely resembles that of the triforium at Rievaulx (Plate LXIX, p. 223 *sup.*) which indeed may have been taken for a model, for it has one bay next the crossing in which a semicircular arch encloses the pair of two-light openings as at York. The transepts at York have wooden roofs of a waggon form, ornamented with ribs, and with side pockets over the windows. The effect of these is good and preferable to the wooden imitation of stone rib-and-panel vaulting in the nave and choir. For except in the aisles there is no stone vaulting at York.

The wooden roofs

Beverley minster

The eastern part of the great collegiate church in the pleasant town of BEVERLEY, incorrectly like the

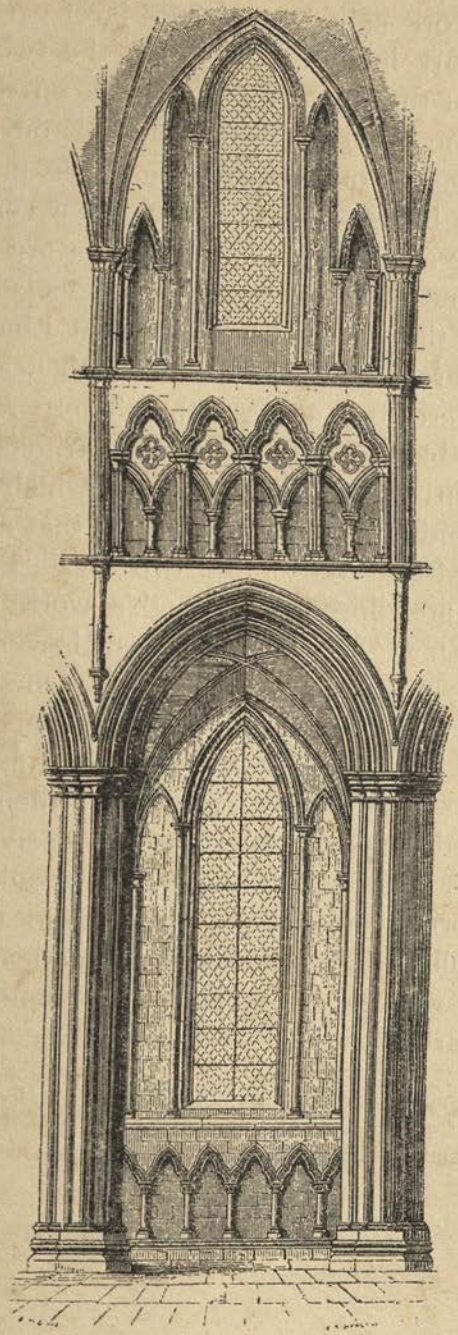


Fig. 97. (From *Archaeol. Inst. Proceedings*, 1846.)

Beverley minster

cathedral of York called a minster, is of early English date. This part includes the choir, the two transepts and one bay of the nave. The plan is on the scale of a cathedral; the great transept has aisles on both sides, the eastern transept one on its eastern side, and preparation was made by four mighty piers for a central tower that was never achieved. The windows are all single-light lancets, and the foliage of the capitals is of a simple early type like that in S. Hugh's work at Lincoln. The three storeys are well proportioned, with a lofty arcade and a fine clerestory (Fig. 97). There is no open triforium, but blank arcading of four trifoliated arches on Purbeck marble colonnettes, behind which and touching it is a second arcade on colonnettes that stand in the middle of the front arches, the two arcades alternating like the wall arcading in S. Hugh's work at Lincoln (Fig. 83, p. 204, *sup.*). The back wall is very thin, and behind it a deep semi-circular arch is turned from pier to pier. For these arches in the second and third bay westward, and therefore beyond the Early English part, some Norman stones with zigzags on them are used, relics employed at second-hand as I conceive of the old Norman nave arcade[1]. This double arcading instead of a real triforium evidently caught the local fancy, for it was carefully imitated and continued in the 14th century nave westwards, though with stone colonnettes instead of marble.

Its great scale

The triforium

[1] It has been supposed at Beverley that these are really Norman arches in position; but they are far too high up for that, and they occur in the 14th century nave and spring from masonry of that date.

CHAPTER XIV

THE EARLY POINTED ARCHITECTURE OF FRANCE AND ENGLAND COMPARED

THE account of the Early Gothic schools of France and England has now been brought up to the time when both in construction and design they had been developed on original lines, free from trace of Romanesque influence. It will have become evident that by the middle of the 13th century they had so far diverged as to fall into distinct national styles, with many points of difference between them, and as time went on this difference was accentuated. While in the 14th century English Gothic melted into the graceful curvilinear Decorated style of the Lady Chapel at Ely, Selby, and the choir screen at Southwell, the French persisted in geometrical forms which in the later examples became attenuated and wire-drawn, triumphs less of art than of engineering in stone, as for instance in S. Urbain at Troyes. Before this phase ended English architecture had again passed into a new phase and stiffened into the Perpendicular of the eastern part of Gloucester in 1337—1377; and it was not till the 15th century that France broke out into that wild luxuriant Flamboyant style which has given us S. Maclou at Rouen, the north-west steeple at Chartres, and the gorgeous church of Brou-en-Bresse which may be con-

Divergence of French and English Gothic

English curvilinear

English perpendicular

French flamboyant

Early Gothic in France and England compared

trasted with the contemporary Perpendicular—once more become luxuriant,—of Henry VII's chapel at Westminster.

Both countries had mastered the science of constructing vaults over wide spans, with ribs and panels, instead of the plain cross-groining of the crypts at Winchester and Canterbury, or the barrel vaults of Arles and Autun. In both the system of resistance to the thrust of vaulting was understood and successfully applied, but at first the French pushed it to its extreme logical consequences more thoroughly than was done on this side of the Channel.

The ideal of Gothic construction

The constructional theory of a Gothic church, in perfection, is this. Support should be given at those points in the articulation of a building on which the thrusts are concentrated by large buttresses at right angles to the wall, either directly applied to it as in the Ste Chapelle and King's College Chapel at Cambridge, or when removed out beyond an aisle bridging across it by a flying arch. These buttress piers may be regarded as sections of the side wall, wheeled round at right angles to the axis of the building. The space vacated by them is filled by curtain walls, which receive no thrust, have only themselves to carry, and may therefore consist mainly of windows. At Amiens and Beauvais we see this theory

realized in France

of construction thoroughly worked out. The lower windows of the aisles are enormously wide and reach from pier to pier: the piers that divide them are very little wider than the outside buttress: the triforium consists of two thin walls with a passage between them, the inner wall, being pierced with traceried openings: and the whole width of the space above which closes the side vault is occupied by an immense window whose outer arch forms the wall-rib of the vault. The piers between

these clerestory windows are only wide enough to receive the flying buttresses which sustain the nave vaults, and descend on the massive pier beyond the aisle. At Beauvais and in the nave of S. Denis the structure is still further lightened by piercing the back wall of the triforium with windows looking over the aisle roofs, which are kept down on purpose. Both at Amiens and Beauvais the clerestory and triforium are combined, and at the latter especially the triforium becomes part of the fenestration. By way of still further lightening the construction the clerestory passage which is a constant feature in Romanesque churches is abandoned. That in the triforium remains, but the outer wall goes no higher; the passage is roofed with an exterior terrace, and the inner wall alone is carried up for the clerestory window.

The glazed triforium

Thus every atom of material is economized, and the building consists of a series of parallel buttress-piers at right angles to the wall and the axis of the church, between which is a curtain,—a *tapisserie*,—chiefly of glass, to exclude weather, which in theory might be taken away without disturbing the structure. In practice of course the piers are steadied by the great arcades and the arches of triforium and clerestory. The buttress-piers receive through the medium of the flying buttresses the thrust of the high vaults, and the building stands by equilibrium of contending forces.

Its extreme economy of supports

These great piers and flying arches are frankly acknowledged, regarded as features in the architecture, and often treated ornamentally; and the whole system is expressed visibly and intelligibly, thus satisfying our third general canon of architectural orthodoxy.

In England, though we see that this system was well understood, and was more or less completely employed

English Gothic not ideal

English Gothic avoids logical extreme

at Lincoln, Norwich, Bath, Malmesbury, not to say at Canterbury and Westminster where French influence comes in, and at many other places, yet it was at first seldom pushed in the same way to its full logical extreme. It is perhaps our way not to do this in anything. We are a people given to compromise; to think that sometimes the half is better than the whole. We have a natural suspicion of theory, and put a higher value on practice. It is this temper that has saved us from French revolutions: our political reforms have been worked out gradually and tentatively, not through blatant political clubs, nor by following doctrinaire teaching, or gospels according to Jean Jacques. We do not therefore find in the earlier Gothic of England that triumphant display of constructive science which we see at Amiens. For one thing our churches, though covering as much, or perhaps more ground, are never so high as those French churches where this construction is most thoroughly developed, and there was not the same need of economy. But independently of these motives the English, like the Italians, seem to have had an aversion from the flying buttress, and to have suppressed it as much as they could. The Italians, rather than support a vault or an arch by a buttress, preferred to confine the thrust by an iron tie at or near the springing; and the English when they did use the flying buttress tried when possible to hide it under the aisle roofs. This in many cases made it useless, for the head of the buttress was too low to receive the thrust of the vault; the proper place for abutment being about one third up the curve of the arch. In many cases they are not wanted at all; as for instance where the vaults took the place of an old Norman ceiling of wood, and where the

English and Italian aversion from the flying buttress

Norman walls were retained though re-cased or otherwise Gothicized. In the nave at Winchester this is so, the walls in the clerestory being 7 ft. 6 in. thick, or including the flat Norman buttress outside 9 feet (Fig. 169, Chap. XXI *inf.*). On this William of Wykeham's vault might have been trusted to rest securely. His architect, William Wynford, however, did construct flying buttresses across the aisle, which are curiously combined in one with the transverse arch of the aisle vault, and are hidden under the roof. They are quite useless, abutting far too low, and in fact they take no thrust from the nave vault, for the aisle wall on which they bear has settled outwards, drawing them with it, and leaving the nave walls upright. In consequence the flying buttresses had sunk, their joints had opened, and they were doing harm rather than good[1].

Winchester nave vault

At Gloucester in the same way the thick Norman wall remains in the nave, to which a Gothic vault was affixed in the 13th century, and here there are occasional flying buttresses hidden under the roof, three on one side and two on the other, placed apparently where signs of movement had appeared. At Worcester it is the same. The choir vault has no flying buttresses except two massive constructions of masonry built in 1712 when movement of the choir walls had given alarm. At Tewkesbury there are none at all, and it may be in order to escape the need of any that the springing of the vault is kept so low in the wall as to cramp the upper storeys.

Gloucester nave vault

Worcester vault

Tewkesbury vault

Our national square east end also gave no opportunity for flying buttresses like the French *chevet*, round which

[1] In the recent repairs I have raised and wedged them up; but they are of little use. The outer wall has been securely buttressed.

they cluster thickly on radiating lines as at Beauvais and Cologne, and form one main feature of the design.

S. Paul's flying buttresses

Lastly, at S. Paul's, Sir Christopher's flying buttresses are carefully hidden behind the great masking wall of the aisle, a deception for which it is difficult to find an excuse.

Norman walls sufficient abutment

In considering the system of vaulting and its supports at Winchester, Gloucester, and Tewkesbury it should be remembered that in each of them the vault was applied to a Norman wall of great thickness, carried up without diminution to the top, with passages in the thickness of the wall both in the triforium, and except at Winchester where the design has interfered with it, in the clerestory also. It is the same in the other great Norman churches, Chichester, Durham, Ely, Peterborough, and S. David's, in none of which originally vaulting over the nave was seriously attempted. Those of them to which a nave vault was added in a later style really hardly needed buttresses at all, and some have done entirely without them.

Thick curtain walls retained in England

But even in those English churches of the 12th and 13th centuries which were built with a view to being vaulted we find the clerestory passage of the Norman style still retained, giving a thick clerestory wall like that of the older buildings. This is the case at Canterbury though built by a Frenchman in 1174, and in the choir of S. Hugh at Lincoln, in the early pointed work at Southwark and Wells, at Beverley, Salisbury and Rochester, and even in buildings of fully developed decorated work at Carlisle and the angel choir at Lincoln. In the Presbytery at YORK, built between 1361 and 1373, though the window of the clerestory is set in the inside of the wall, the architect would not forego his thick wall and has

recovered it in a curious way by an exterior arcade (Fig. 98), thus making a clerestory passage outside instead of in. York cathedral

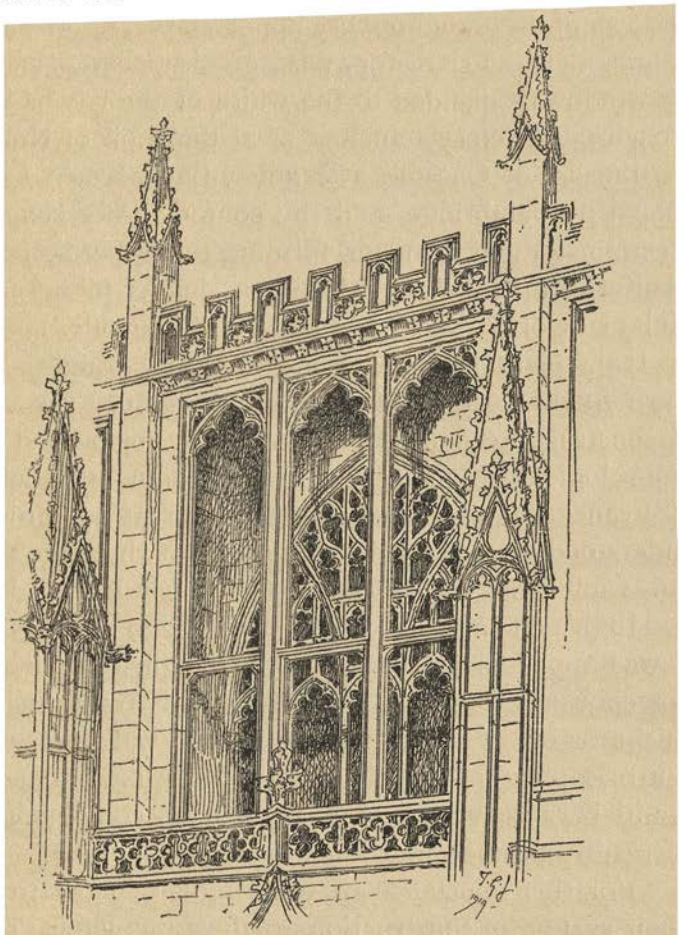


Fig. 98.

In early work, with which alone we have hitherto been concerned, the clerestory consists either of single lights as at Canterbury, or double lights as at Southwell, or triple as at Lincoln, grouped in the bay but not Wall space retained in English clerestory

Wall space in English clerestory

conjoined into a single window. With separate lights such as these of course a good deal of solid wall necessarily remained in the clerestory. It remained also when windows of decorated tracery appeared there. It was not till later that the clerestory passage disappeared, and that

Its reduction

the windows expanded to the width of the bay as in the French perfected system, and as at the choir of Norwich, the transept of Chester, at Exeter, Bath, King's College Chapel at Cambridge, and the contemporary chapels at Westminster and Windsor, forming the upper storey into a lantern of glass, glazed between slender piers carrying vaults supported by buttressing on the outside.

English construction not pushed to logical extreme

It is plain therefore that in Early English work, down to the latter part of the 13th century the science of constructing vaulted buildings was not pushed to the same logical result as in the contemporary buildings of France. The art of opposing thrust to thrust was understood, as we see by the work in the nave and by the vault and flying buttresses which were added to S. Hugh's choir at Lincoln between 1239 and 1255; but it was applied imperfectly. The English architects did not choose to take full advantage of it by reducing the thickness of the clerestory and curtain walls between one buttress pier and another; they still liked to see substantial walls, and perhaps valued the convenience of a clerestory passage in case of repairs.

Mr Moore's definition of Gothic

For this reluctance of the English school to pursue their system of construction to the same logical result as that achieved at Amiens Mr Moore says it is not Gothic at all. Real Gothic according to him is only found in aisled and vaulted churches, where equilibrium is attained by counter-thrust, and by counter-thrust alone. There must be a *chevet* with radiating chapels. The vaults

must rest on transverse, diagonal, and wall-ribs, but must on no account be incorporated with them. The ribs of the high vaults must spring from shafts rising from the floor and grouped with the piers of the arcade, together with other shafts carrying the main arches and the aisle vaults. There must be an outside buttress in the triforium rising into the clerestory and exposed, against which the flying buttress abuts. "Walls proper are almost entirely omitted. Those that are retained are the low enclosing walls of the ground story, and the spandrils of the various arcades. The spaces between the piers are entirely open, like the intercolumniations of a colonnade. They are formed into vast windows divided by mullions and tracery which support the iron bars to which the glazing is attached[1]."

Mr Moore's definition of Gothic

This is an admirable description of a 13th century French cathedral, such as Amiens, and apparently little else, for even Reims does not seem quite to satisfy the writer. But to say this and nothing else is Gothic is not only inconvenient, for there is no other word to describe the style generally, but also quite misleading because it limits the style to only one of its manifestations. Amiens may show the most perfect development of Gothic principles as applied to vaulted construction. But it only illustrates one chapter of the art, that of vaulting, and vaulting however important does not cover the whole ground. Gothic art is something far wider.

Its inadequacy

Exception might even be taken to some of Mr Moore's conditions, on the ground that an architectural feature is only justified by a structural meaning. For instance the wall-rib does not really belong to the vault at all, but to the wall into which it is bonded. It is rather ornamental

Exceptions to his conditions

[1] C. H. Moore, *Gothic architecture*, p. 20.

than necessary. It is often omitted, and the side panel rests on a chase or set-off in the wall just as well[1]. Again there is no structural reason for carrying the shafts that support the ribs of the high vaults down to the ground; for as Viollet-le-Duc points out, the thrust and weight fall mostly on the back of the pier towards the aisle, and the front may be retired without danger. This justifies the common English habit of corbelling out the vaulting shafts from the spandrils of the great arcade, as in the choir of Ely, the nave and presbytery at Lincoln, and the nave and choir at Exeter, or even from the triforium spandrils as at Wells. Again, if a *chevet* is essential what becomes of Laon and other square-ended French churches like S. Serge at Angers?

Mischief of the limitation of the term

This attempt to limit the term "Gothic" is not as might be supposed a mere matter of words. It touches the whole conception of Gothic art by attempting to confine it to one of its phenomena. What other word is there to cover the whole of mediaeval art through the whole period and in all its branches, which all reflect equally the mediaeval mind, whether the medium be wood or stone, glass or iron, painting or sculpture, prose or poetry. In all we see the same restless energy, the same striving for more perfect modes of expression, the same discontent with what had been done and the same rush ever onward to something new. It was the time of

Gothic the style of youthful Europe

the youth, almost of the childhood, of Europe. If it was the age of faith it was also the age of credulity and superstition. Like children the men of that time were always asking "why," and not satisfied with an answer that was not positive and authoritative. The world of unseen powers was ever near them,—good and evil,

[1] *v.* Plate VI, p. 72, *sup.*

saints and devils, especially the devils. It was a time of ever widening intelligence; of the beginnings of science, even if it were confused with witchcraft: of the stirrings of philosophy, the cult of Aristotle, the disputes of the School-men and the battle, of which the far-off echoes reach us, between Nominalists and Realists. We can read all this in the art. Gothic in all its various branches is the true expression of the mediaeval mind. In the great prelates we see the religious fervour which inspired them to undertake these vast constructions to the honour of God and the glory of their peculiar saint, not less than the desire to eclipse the splendour of the nearest minster. In the people who supplied the means, and poured their riches into the coffers of the church we see the blind devotion which hoped with the stones of these holy buildings to pave a way to heaven. In the architects we see the passion for new experiments and daring feats of construction never before attempted which drove them from style to style, abandoned as soon as mastered. The art never stood still in painting and sculpture any more than in architecture. From the heavy mosaic glass which sheds a dim mystery on the aisles of Canterbury, Chartres, and Bourges, betraying, as Mr Winston observes, the origin of the art in sunny lands, the design soon passed to the grisaille of Salisbury and Angers, and the seven sisters at York; to the lighter treatment of Wells and Merton Chapel at Oxford; and on to the brilliant glass of the east windows of York and Gloucester. The progress of sculpture was not less rapid from the stiff conventional figures of Arles, S. Gilles, and Vézelay, to the classic grace of Chartres, Paris, and Reims, and the fine statuary of Wells and Westminster. To understand the meaning of Gothic art it is necessary to regard it as

Gothic expressive of the mediaeval mind

Its restless progress

Gothic the language of the Middle Ages

a whole, not piecemeal, as in fact the language by which the mind of the Middle Ages found outward and visible expression in every field of art.

The artists

As for the artists and their craftsmen it has been the fashion to imagine them working with a piety and devotional fervour now unknown. But I fancy they were very like the workmen and artists of the present day, allowing for difference of education and knowledge. Art and religion I fear do not always go hand in hand, and if Fra Angelico rose from his knees to paint his pictures, Perugino whose work breathes the tenderest religious feeling was, according to Vasari, little better than an infidel. The art-workers of the Middle Ages shared of course the religious beliefs as well as the superstitions of the day. In the Romanesque period we read of diabolic interruptions of the holy work, and of miraculous assistance by saints and angels, but these are confined to that period, when the cloister was the craftsman's school and monkish hands and brains were employed on the building. When the art passed into the hands of laymen we hear no more of these supernatural interventions, and the chronicles are silent about the triumphs of the Gothic school, which no longer had the same interest for a monkish historian. The sculptors of the later schools amused themselves with ridicule of the holy fathers of rival orders, and the Benedictines of Norwich, like the rest, made no objection to caricatures of monks and friars in the misereres of their stalls.

Mediaeval scamping

Nor, I regret to say, was the work always as well done in the Middle Ages as it should have been. There was bad building and scamping then as now. Not to go beyond my own experience, I have constantly been surprised by the carelessness of the old builders about

their foundations. At Winchester they are laid on a peat bog and stand in water. Fortunately the walls are unusually well built for that time, or the settlements, dreadful as they were, would have been worse, and the cathedral would long ago have been in ruin. At Christchurch priory the south side of the nave has had to be underpinned. At S. Cross the foundations are on soft wet ground, and serious settlements have taken place. At Ashbourne the subsoil is as bad as at Winchester, and the foundations are only of rough stone loosely piled together without any mortar. At Bishop's Waltham the footings are laid on the top of the ground which is of clay. The mortar is often mere rubbish. The lovely Early English tower of S. Mary's at Stamford, to which Sir Walter Scott used to take off his hat when posting through the town northwards, is put together with nothing but dirt scraped off the road containing very little lime, if any. It is the same at the pretty little 13th century tower and spire of Duddington a few miles away, and is probably no better in most of the fine churches of Northamptonshire. At Chichester, before the spire fell, the mortar of the interior of the piers ran out like water when a stone was withdrawn, and I am told it was just the same at Peterborough. For all these sins of our mediaeval masters we are now paying the penalty. It seems to have been much the same in France, for Viollet-le-Duc remarks that the execution of Gothic work, with a few exceptions, is far inferior to that of the Romanesque builders, who showed much greater care and deliberation than their successors in preparing for their masonry and in carrying it out.

But though the men of the Middle Ages had their defects and their shortcomings like ourselves, they had

The mediaeval artistic temperament

what we have in a great measure lost, a lively and free artistic temperament, which made it natural and easy for them to do things beautifully, because they did them unconsciously. For they had the inestimable advantage of having no choice; they knew no other style but their own; and had no more idea of any other way of expressing themselves in stone or wood, glass or metal, than they had in words. Whereas we, with our knowledge of all the schools and all the ages, are hampered by it: we cannot forget it if we would, we ought not to try to do so if we could, for it is the condition of our day, and therefore should enter into the conception of our art if it is to represent us. But this does not mean imitation. So long as our work is consciously imitated from what was done in other days and under other conditions so long will it be unreal. The only modern work that will have any interest for our children will be such as has come naturally and unconsciously to the artist to meet the occasion. Unfortunately there is little of it.

Conclusion

Before closing the subject of French Geometrical Gothic let us briefly review the final result at which it arrived. It is the outcome, as I have tried to show, of a strict logical progression from stage to stage, and we cannot but admire the steadiness and sureness of its advance. Advantage was taken of every accident, of every experiment, to economise material, reduce obstructions, and suppress all that did not form part of the constructional skeleton. But however much we may admire the science displayed in the perfected style the question obtrudes itself whether it did not go too far. In buildings where everything depends on the equilibrium of forces, where thrust must balance thrust and nothing is in repose, where no margin is left for safety, and

every part depends on the rest standing firm, so that if one gave way the rest would follow, one doubts whether the result is worth the risk, and whether too much has not been sacrificed to engineering ingenuity. Experience justifies this doubt. Amiens, where the theory of stability by equilibrium of forces finds the fullest expression, has had to be held together by iron cramps all along the gallery: Beauvais and S. Denis have their buttress-piers tied together with iron to prevent their buckling: Seez cracked and settled and threatened ruin long ago, and I hope has by this time been repaired: S. Quentin has been propped and banded with iron and narrowly escaped collapse. Other instances are numerous. Fortunately France is not subject to earthquakes, or I imagine a much milder shock than any that have failed to bring down S. Sophia, shaken and decrepit though it be, would lay any one of the French cathedrals later than that of Reims level with the ground.

Logic is not everything, and in England it is not our way to hunt our conclusions to death. Our buildings do not drive things so fine, but leave something over and above the least that would do. And in France I confess I often turn from the fine-spun edifices of the end of the 13th and the 14th centuries to the more generous, if less scientific solidity of the preceding period. For me French Geometrical Gothic seems to have reached its highest achievement at Reims rather than at Amiens.

To-day,—Sept. 21, 1914,—while these sheets are passing through the press, comes the news of the destruction of Reims cathedral by the brutal savagery of "cultured" Germany. We are told there was no military reason for it. The church was serving as a military hospital for wounded German prisoners, who were with difficulty saved by their French captors from destruction by the fire of their own side. The finest monument of French architecture has been sacrificed to glut the disappointed fury of the invading hordes, baulked of the easy triumph they intended.

CHAPTER XV

WESTMINSTER ABBEY AND THE MEDIAEVAL ARCHITECT

The Confessor's church

THE Norman church of the abbey of Westminster was begun by Edward the Confessor in 1055, and the choir was consecrated in 1065 when he was too ill to attend, just before his death. The name of his architect, "Godwin, called Great Syd, master *cementarius* of the church," has been preserved[1]. By his name and that of his son Aelfwin he must have been a Saxon, and it is curious that he should have been the architect of what William of Malmesbury calls the first church built in England after the Norman manner. The nave seems not to have been begun till after the Conquest, in 1100.

King Henry III

This church stood till the middle of the 13th century, in the reign of Henry III. That prince, Dante's king of simple life[2], was the greatest virtuoso of his time: he had an unbounded passion for architecture and the sister, and then subsidiary, arts of painting and sculpture, and for collecting beautiful stuffs, jewellery, and not least of all relics. Of the last article on this list there was no lack of supply at that age, and we hear of a phial of the Holy

[1] Charter in 29th Report of the Record Office. Cited W. R. Lethaby, *Westminster Abbey and Craftsmen*, p. 102.

[2] Vedete il Re della semplice vita
Seder là solo, Arrigo d' Inghilterra,
Questi ha ne' rami suoi migliore uscita.
Purgat. VII. 130.

WESTMINSTER ABBEY

Blood, warranted by the Patriarch of Jerusalem, and a stone with a footprint left by our Saviour at his Ascension, which the king bore in procession from S. Paul's to Westminster. To Henry's taste for art we owe what I venture to call the loveliest of all churches (Plate LXXVII), but his people had good reason to complain of his extravagance in building and the extortion by which it was supported, as the subjects of Solomon and Justinian in their time had done for the same reason.

The first Lady Chapel

As early as 1220 a Lady Chapel had been built at the east end of the Confessor's apse, no doubt in the style of Salisbury. It had a wooden roof, and from traces that have been found it seems to have occupied the area of the nave of its successor, the present chapel of Henry VII. To this the king had been a contributor. In 1241 he had ordered a golden shrine for the Confessor, and was no doubt contemplating the rebuilding of the abbey church itself.

The new choir

After two years of preparation the work was begun in 1245. The management of the expenses was entrusted to Odo the Goldsmith and Edward his son, who acted as treasurers, like Julianus Argentarius for Justinian at Ravenna, and Elias de Derham for Bishop Poore at Salisbury. The industry of Professor Lethaby[1] has recovered the names of the king's master-masons, the actual architects of the building. The credit of the general design of the presbytery and transepts, and the first bay of the choir west of the crossing seems due to Master Henry of Westminster. He was succeeded in 1253 by Master John of Gloucester, who was followed by Master Robert of Beverley from 1262 to 1280. But Master Henry's

The architects

[1] W. R. Lethaby, *Westminster Abbey and Craftsmen.* A work for which students of English Art will be very grateful.

The architects of the Abbey

design commanded such respect that both his successors, instead of working in the style of their own day, as was usual in the Middle Ages, kept to the design of their predecessor, with only a few minor differences of detail. These all held the office of King's Mason, for the work was done by the king and not by the monks, the church having always been regarded as a sort of royal foundation, and to this day at the time of a coronation the state officials take possession of it for that ceremonial.

Position of the mediaeval architect

In contrasting the modern architect with those men to whose genius we owe the architectural triumphs of the Middle Ages, the position of the latter has been much misunderstood. When it came no longer to be believed that great prelates like William of Wykeham were the real architects of their buildings, we were taught that these buildings were not the work of individual architects, but of a school of craftsmen whose very names are unknown. Full credit must no doubt be allowed to the influence of the school, but it is nevertheless obvious that every one of the great works we admire must have been designed by some one member of that school, to whom its characteristic features are due. There can be no artistic conception without an author: and it is absurd to suppose that the design of any great building in the Middle Ages came of itself from the associated labour of a group of builders without a single head over them to direct, as some fanciful people would have us believe. A great work of architecture can no more come into being in that way, than a great picture from a committee of painters, or a great poem from one of poets[1]. There is no great building of the Middle Ages which has not an

The school and the individual

Need of a single author for the design

[1] L'on n'a guère vu jusqu'à présent un chef-d'œuvre d'esprit qui soit l'ouvrage de plusieurs. LA BRUYÈRE.

individual character of its own; the expression of an individual mind; of a single artist, working of course in the style of his day,—what else could he do?—but who nevertheless put his personal stamp on his work. Nor is there any mystery as to who these men were. They have indeed rarely put their name to their work; Vasari is astonished at the stupidity and indifference to fame shown by their not doing so[1]. But Professor Lethaby gives us the names of all the Master-Masons and other chief craftsmen at Westminster, and believes it possible to do the same for Canterbury, Lincoln, York, Durham, Salisbury, Wells, and Exeter by diligent search among the archives of those places[2].

Possible recovery of their names

That their names are often lost is due partly to the illiteracy of the age, and perhaps more to the etiquette which required that the building should be described as the work of this or that abbot or bishop. And yet we do find, now and then, the craftsman who really designed the work inscribing his name on his masterpiece, as if he were anxious to secure the credit of it, and did not wish to be forgotten. Gislebertus has put his name on the tympanum at Autun; Gaufredus on the doors of Le Puy; Thomas Moyses has cut his name on the stone he set at Durham; and at Reims and Amiens the figures and names of the architects appeared with those of the bishop in the labyrinth on the floor. We have the names of Edward the Confessor's architect at Westminster, of Pierre de Montereau at S. Denis and

Architects names recorded

[1] I quali tutti edifizi havendo io veduti e considerati... e non havendo trovato mai non che alcuna memoria de' Maestri, ma ne anche molte volte in che millesimo fussero fatti, non posso se non maravigliarmi della goffezza e poco disiderio di gloria degli huomini di quell' età. Vasari, *Vita d' Arnolfo di Lapo.*

[2] *Op. cit.* preface.

Names of architects

Paris, of fourteen architects employed on the cathedral of Rouen between the end of the 12th and the middle of the 16th century[1], we have that of William Joy, the master-mason who built the chapter house at Wells for Dean Godlee[2]; that of Richard of Farnham, the architect of the chapel of nine altars at Durham, and at Lincoln is the gravestone of Richard of Gainsborough, builder of the central tower and the cloisters. Street gives a list of no less than 137 architects, sculptors and builders in Spain from 1129 onwards. He says he found that almost all the architects were laymen, and "just as much a distinct class as architects of the present day[3]."

As early as the 13th century the master-masons seem to have had an education rare at that age among laymen. In some cases they were entrusted with the management of the building accounts. Wilars de Honecort could write, and write as beautifully as any scribe, as we see not only by the notes appended to his sketches, but by a whole page of manuscript at the end of his volume in which he gives recipes for a medicine to cure wounds, and for preserving flowers. He understood Latin also, and writes against his sketch-plan for a large church,

Wilars de Honecort

> Istud presbiteriu' invener't ulardus d' honecort
> & petrus de corbeia ĩr se disputando[4].

It appears that the Master-Mason acted to some extent much like a modern architect, with the important difference that he was constantly on the work instead of directing it from a distance. The king's masons had charge of all the royal buildings. Master Henry while engaged at Westminster was also employed at Windsor

The king's masons

[1] Loisel, *La Cathédrale de Rouen*, p. 129.
[2] Canon Church, *Early History of the Church of Wells*, p. 296.
[3] G. E. Street, *Gothic architecture in Spain*, Chap. XXI.
[4] Plate XXVIII, Ed. Willis.

and was sent to see about the fortifying of York castle. Master John of Gloucester, his successor, was also engaged at Windsor. Occasionally we find them supervising the building accounts, a painful duty well-known to modern architects. They were often contractors as well as designers and craftsmen, employing men under them, and paid by piecework. This practice continued down to the 17th century. In the building accounts of Wadham College at Oxford we find Mr William Arnold receiving 20 shillings a week, evidently for acting as architect; but he also supplies windows for the ante-chapel and hall at so much a piece, and carries out other work in the same way[1]. Similarly John Westley and Thomas and Robert Grumbold were employed on various buildings at Cambridge, both as architects and contractors[2].

Architects at Oxford and Cambridge

The king's masons were all laymen. We hear of Thomas the Mason and his wife at Windsor in 1252; of Alice, wife of John of Gloucester, and his son Edward in 1260, and of Alicia the wife and the daughters of Simon of Pabenham in 1333[3]. They held a good social position, and were owners of house property, citizens and freemen, eligible to serve on juries and inquisitions. Master John of Gloucester is rewarded by the king in 1258 with gifts of land and houses for his excellent services at Gloucester, Woodstock, and Westminster. In 1255–6 five casks of wine are ordered to be returned to him for five which the king took at Oxford, an incident seeming to imply some personal intimacy[4].

King's masons laymen

Their wages were higher than those of ordinary craftsmen, and were increased and sometimes doubled

Master-mason's remuneration

[1] My *History of Wadham College, Oxford.*

[2] Willis and Clark, *Architectural History of Cambridge*, vol. III. p. 531.

[3] Lethaby, *op. cit.* pp. 152–165.

[4] *Ibid.* p. 161.

when they had to travel[1]. John of Beverley in 1275 had 12*d.* a day, which was increased to 16*d.* when he travelled, and the king gave him a tun of wine. Twice a year they received furred robes, a curious form of remuneration which I have seen in foreign contracts as well. Geoffrey de Carlton, *cementarius* to the king at Windsor in 1378 receives 6*d.* a day and 20*s.* a year for robe and shoes[2]. In 1351 a Master-Mason was paid 26*s.* 8*d.* over his wages which were from 1*s.* 8*d.* to 2*s.* a week, and 16*s.* 4*d.* for his dress and shoes, but in 1354 he refused the dress in a pet, because he had been kept waiting for it[3]. Henry Yevele, King's Mason in 1389, was promised a robe yearly of Esquire's degree; in 1390 he was exempted from serving on juries, and the manors of Fremworth and Vannes in Kent were granted him in lieu of his pension of 1*s.* a day[4]. William Virtue's robe in 1510 was to be like the suit of Esquires of the Household[5], and his contemporary, William Drawswerd, one of a famous family of image makers at York, was Sheriff, Member of Parliament, and Lord Mayor of his native city[6]. The gravestone of Richard of Gainsborough at Lincoln, A.D. 1300, represents him under a rich triple canopy, equal to those of the canons. It would really seem that in the 13th and following centuries, far from being the humble unknown mechanic that has been supposed, the Master-Mason architect fared socially as well as the architect who represents him at the present day.

Master-mason's social rank

Though sometimes the Master-Masons, as has been said already, had charge of the accounts[7], they were

The Surveyor

[1] Lethaby, *op. cit.* p. 164. [2] *Ibid.* p. 197.
[3] *Ibid.* p. 202. [4] *Ibid.* p. 215. [5] *Ibid.* p. 229.
[6] *Ibid.* pp. 233–4. [7] *Ibid.* p. 167.

generally controlled by a Surveyor, or Treasurer. At Westminster he was called Keeper of the King's Works. At the beginning of the work this office was held by Odo the Goldsmith and his son Edward. In the roll of 1249 occur the names of Dominus Edwardus, *Clericus*, and Magister Henricus, *Cementarius*[1]. In 1378 Geoffrey de Carlton was *Cementarius* at Windsor, and William of Wykeham, who was succeeded in 1389 by Chaucer, was *Clericus*. Again in 1362 we find the names of Mistre William Herland, chief carpenter, Henry Yevele, deviser of masonry, and William of Wickham, clerk.

William of Wykeham as clerk

[1] *Cementarius* is the usual term in England. In Italian contracts the Master-Mason is styled *Lapicida*. At Venice the architect Zuane Bon in 1430 translates this into *Tajapiera*, Venetian for *tagliapietra*.

CHAPTER XVI

WESTMINSTER ABBEY, *continued*

French taste of Henry III

HENRY III had French sympathies, and he seems to have determined that his new church should follow

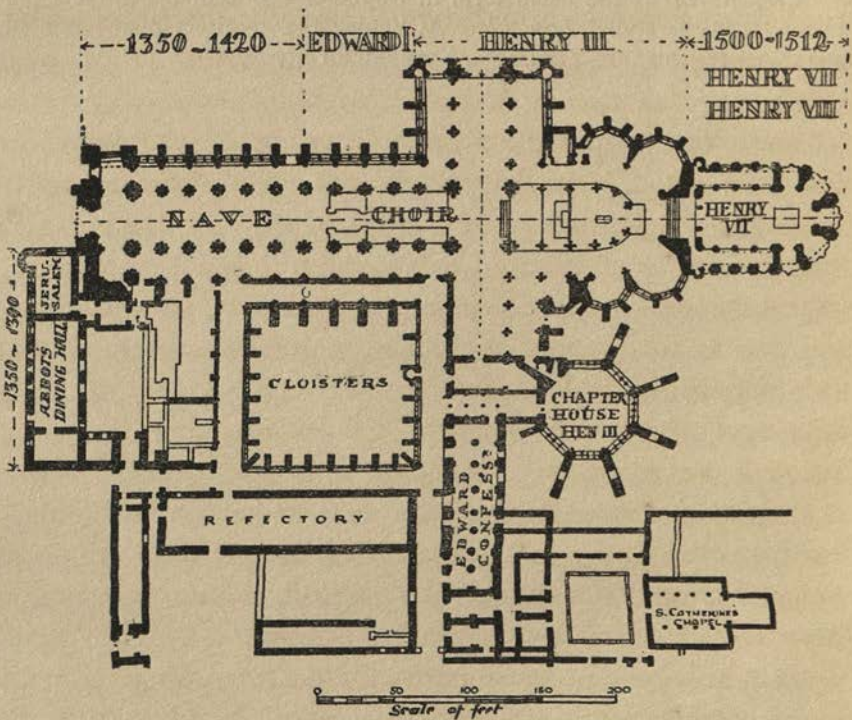


Fig. 99.

the style of the cathedrals then either just finished or in progress in the French royal domain. The cathedral at

Reims, which was begun in 1213 after a fire, had been finished in 1241. The west front of Notre Dame at Paris was built between 1218 and 1235. When Henry's work at Westminster was started in 1245, the choir of Le Mans, and the nave of Amiens were just completed, and Pierre de Montereau was busy building the Ste Chapelle, and the nave of S. Denis.

Contemporary work in France

The effect of the king's French taste was to bring a foreign influence to bear on native English architecture for the third and last time till the Renaissance. It was five-and-forty years since S. Hugh built his apse at Lincoln, and since then apses had been given up, and the great English churches ended square. The Continental apsidal end, however, reappeared at Westminster (Fig. 99), with a regular *chevet* of apsidal chapels radiating from an ambulatory aisle, the only example of the kind on this side the Channel: for though there are chapels flanking an ambulatory at Norwich and Gloucester, and chapels had been attached to Conrad's apse at Canterbury, they were not grouped continuously, nor do they radiate; and the quasi-chevets at Pershore and Tewkesbury are very imperfect and unlike the French model. In the façade of the north transept again we have the only English example of anything like the great French portals, and Professor Lethaby has observed its likeness to the west front of Amiens[1]. The double range of flying buttresses also, as Sir Gilbert Scott observes, is more like French work than English.

Disappearance of the apse in England

Its reappearance at Westminster

The north portal

But however much French ideas were adopted in the design they passed through an English mind, and the result has been that they appear in an English version. "I should imagine," says Sir Gilbert Scott, "that an

English version of French model

[1] *Op. cit.* p. 124.

Travels of architects

English architect or master of the works was commissioned to visit the great cathedrals then in process of erection in France, with the view of making his design on the general idea suggested by them. Would that like his contemporary Wilars de Honecort he had bequeathed to us his sketch-book[1]."

It was evidently the practice then for architects to travel about, and see what was going on elsewhere in the way of their profession. This explains the remarkable way in which changes of style took place concurrently in distant parts of the same country.

Wilars de Honecort

Wilars de Honecort made his tour among the great buildings then rising, and we have his sketch of the new apsidal chapels at Reims, and his note that this was how the chapels at Cambrai should be done[2]. No doubt Master Henry of Westminster filled his album with similar rough notes of what he had seen at Reims, Paris, and Amiens.

Work of Henry III

The eastern arm at Westminster is much shorter than the usual English proportion, for it was bounded by the Lady Chapel which had just been finished, and the apse therefore occupies the area of that of the Confessor's church. King Henry's building included the apse and *chevet* and the short presbytery, the transepts, and the

Work of Edward I

two lower storeys of the first bay of the nave. Westward of this remained the rude Early Norman nave of 1100. Edward I finished the clerestory of the first nave bay, which has one jamb of his work, and one of

[1] *Gleanings from Westminster Abbey*, p. 20.

[2] *Wilars de Honecort.* Facsimile by M. Lassus, translated and edited by Professor Willis. Plates LIX, LX. Et en cele autre pagene poes vus veir les montees des capieles de le glise de Rains par de hors. tres le comencement desci en le fin ensi com eles sunt. dautretel maniere doivent estre celes de Canbrai son lor fait droit.

his father's, as Sir Gilbert Scott has shown[1]; and he rebuilt in the new style the next four bays of the nave. The remaining seven bays were built between 1350 and 1420, and afford a rare instance of mediaeval respect for a previous style; the general design of the choir being faithfully followed, though the details and capitals betray the "Perpendicular" mason.

Work of Edward III, Richard II and Henry IV

From the dates in the Fabric rolls it may be assumed that the original design is due to Master Henry, and that the second part under Edward I though begun by him was finished, or nearly finished, by his successors John of Gloucester and Robert of Beverley. The completion of the nave in the Perpendicular period is due to Master Henry Yevele, the King's mason, who was also employed at the Palace and the Tower of London[2].

The architects

Owing to the shortness of the presbytery, the choir, instead of being as usual in Benedictine churches under the central crossing, is moved entirely into the nave. It is the same at Reims, which is certainly one of the churches visited and studied by Master Henry.

The choir

Westminster, though the loftiest of English churches, measuring 100 feet to the crown of the vault, is surpassed in magnitude by its continental rivals. The outside, corroded by London fog and soot, patched, refaced, and remodelled by frequent restoration, has only its fine proportion and general features of construction to recommend it. But the inside has no rival in Gothic architecture for richness and beauty (Plate LXXVII). Nowhere else is there such delicacy of detail, such grace of proportion, such wealth of marble columns, such splendour of diapered wall. Nowhere else is there a triforium

[1] *v.* illustration, *Gleanings*, Plate X, p. 32.

[2] Lethaby, pp. 165—214.

comparable with this, with its lovely double traceries and richly moulded and sculptured arches; nowhere else are there vaults more fairly devised, or banded so choicely with stones of various colours. Compared with a bay of Westminster one of Amiens seems poor and thin, the triforium bald and shadowless, the mouldings slight and ineffective. There is no finer composition in Gothic architecture than the transept ends, with the huge rose window above, the return of the triforium beneath it, pierced and glazed at back, and filled with angelic sculpture in the spandrels. And nowhere do we find wall-arcading to surpass that which runs round the lower part of the walls, with its marble shafts and graceful carving.

The transept

The proportion

The proportions of the bays at Amiens and Westminster are very similar. Dividing the height as in former cases into 32 parts we get this result:—

	Amiens	Westminster
Arcade	16	16
Triforium	$4\frac{3}{4}$	$5\frac{1}{4}$
Clerestory	$11\frac{1}{4}$	$10\frac{3}{4}$
	32	32

In both the arcade takes half the height, but at Westminster the triforium is inscribed in a square, while that at Amiens is wider than it is high. The width of the bay at Westminster is $5\frac{1}{4}$ parts, at Amiens a little more.

The windows

Beginning of bar-tracery

In one more point of importance it is probable that French influence showed itself. Westminster contains either the first, or at all events almost the first, examples in England of perfected bar-tracery. The windows are simple in the presbytery and apse where the work began, but by the time the transepts were reached, some seven

T. G. J.

WESTMINSTER ABBEY—View in Triforium

or eight years later, the elaborate tracery of the great rose windows showed that the masons had nothing more to learn in that class of work. The Ste Chapelle which was rising at the same time as Westminster has traceried windows completely developed, some of which seem to have set the pattern for windows at Westminster[1]. But I defer the subject of tracery to another chapter.

English detail

With these points the resemblance to French work ends. The Purbeck columns, with their detached marble colonnettes, and the round moulded capitals are all purely English; so is the vaulting, which is quadripartite with the ashlar of the panels filled in English fashion, and banded with stones of two colours; so are the acute arches of the main arcade, which are struck with a radius twice the length of their span; so is the carving, for the French artist whose touch Sir Gilbert Scott thought he detected in some of the capitals of the wall-arcade is the exception which proves the rule. This last invasion of foreign taste had even less influence than the former on the current of English art. No more apsidal churches were built, nor except in a few instances which will be noted by and by was the example of Westminster in other respects followed elsewhere. Above all even at Westminster itself the ideas taken from the French were translated into English.

The triforium

According to the more usual fashion in England the triforium at Westminster is open backwards to the space over the aisle vaults, instead of being closed by a wall as at Amiens and at Southwark, or glazed with windows as at Beauvais, and as it is here when it returns across the transept end. The aisle vaults are levelled up and a paved floor formed, making a spacious gallery round

[1] *Gleanings*, p. 19.

The triforium

the church (Plate LXXVIII) capable of accommodating a great multitude of spectators. These triforium galleries were common in Romanesque churches, and in France they were often covered with an upper vault, so that the roof space above required a second triforium making four storeys, as at Tournay, Noyon, Laon, Paris, and S. Remi at Reims. The Gothic triforium was not always made use of, and at Lincoln and Salisbury it is not floored but you walk on planks over the ridge and furrow of the aisle vaulting. At Westminster pains were taken to make it serviceable by flattening its roof so that the outer wall could be raised high enough to contain a row of triangular windows. It also has the singularity of being continued not only round the *chevet* but also over the apsidal chapels, making an upper storey of them. The extreme beauty of this triforium, both in detail and in proportion, must strike everyone. It is a faultless example of English Gothic at its best, and in my opinion has no rival anywhere (Fig. 100). Fig. 101 shows the detail of the shaft.

The clerestory

The clerestory is carried up to the level of the side vault, and quite fills the bay, thus satisfying the strict logic of Gothic construction by obliterating the curtain wall, the window arch forming the wall rib of the vaulting. Owing to the narrowness of the bay the wall arch is stilted to such a degree that the panel of the vault has to wind a great deal, and for some way up there is little but a thin wall on the back of the ribs next the side wall. The clerestory passage has disappeared, and the window is brought well towards the inside face.

Polychrome masonry

Westminster is one of the places in England where polychrome masonry, rare on this side of the Alps, is

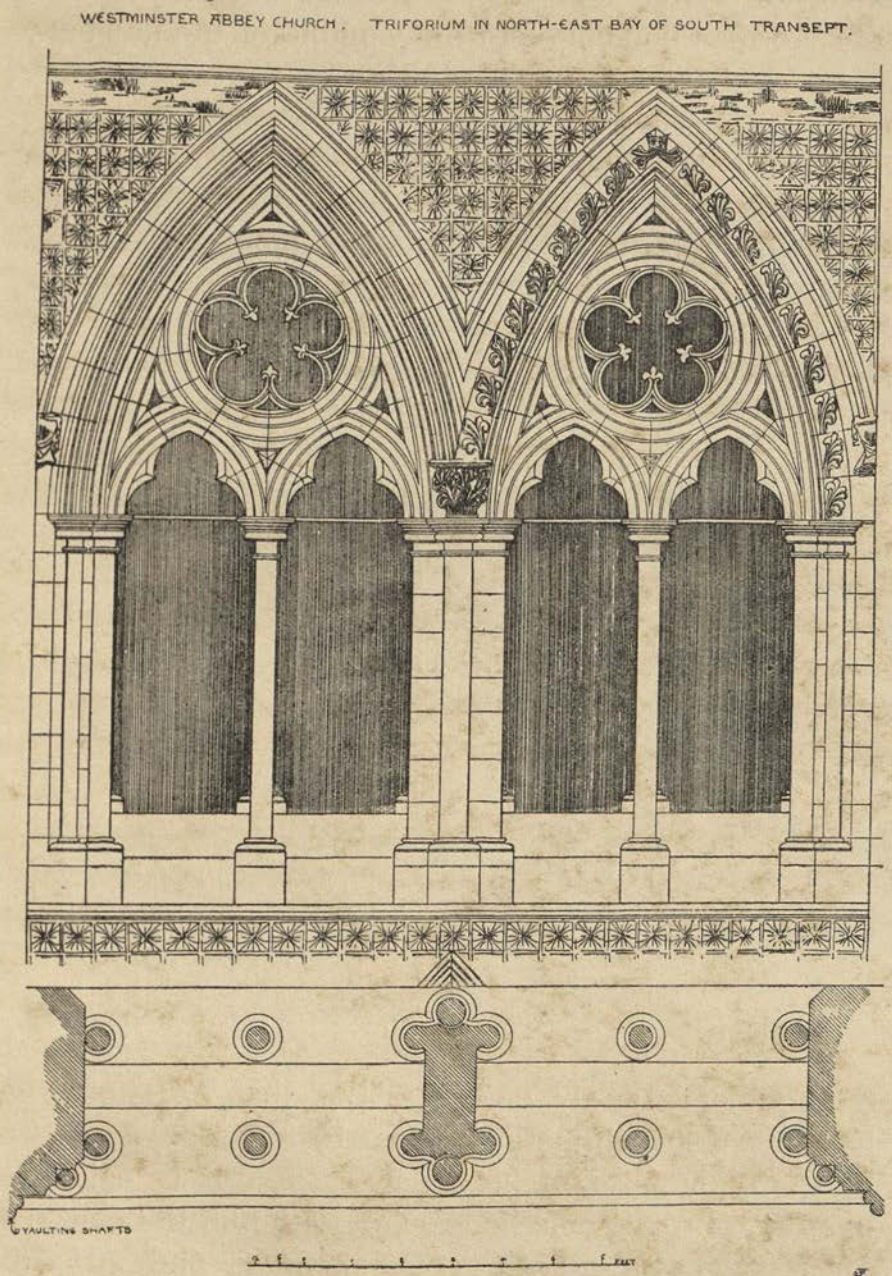


Fig. 100. (From *Spring Gardens Sketchbook.*)

employed. There are traces of chequer work in the early Norman building, and the vaulting of the nave and of the cloisters is banded with stone of two different colours with charming effect.

Italian work

King Henry's foreign inclinations were not limited to France. Here alone in England till the time of the Renaissance do we find specimens of Italian art. It was

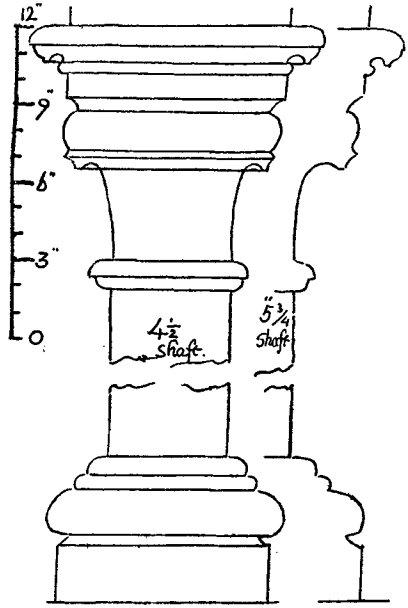


Fig. 101.

required of a newly elected abbot that he should go to Rome for confirmation, and Abbot Ware went there in 1258, the year of his election, and it is said also in 1267. From Rome he brought with him the materials for a pavement of *opus Alexandrinum*, and an artist Odericus to lay it for him in front of the High Altar. Twenty-five years later in 1283 he was buried under the

The mosaic pavement

north side, of his own pavement in a place chosen by himself where, as his epitaph says, he now bears up the stones which once he bore from the City[1]. The mosaic pavement

Abbas Ricardus de Wara qui requiescit
Hic portat lapides quos huc portavit ab Urbe.

For the perfection of these pavements it is necessary to use the materials of the Italian workmen, red Porphyry, green Porphyry or as they call it Serpentino, and Palombino, an opaque creamy-white stone something like that used by lithographers[2]. No other stones will do as well, as those know who have tried to do without them. They were only to be had in Italy, for till modern times the porphyry quarries were unknown, and all the mosaic of the Middle Ages is made from antique fragments, sawn into thin slabs, from the ruins of Roman buildings. Many of the circles in these pavements are slices of antique columns cut horizontally.

In Italy the discs, and slabs, and interlacing borders of mosaic are set in white marble, but the only marble at the command of Odericus and the Abbot was our Dorsetshire Purbeck, which fails to do full justice to the colours of the inlay, and has moreover stood wear and damp rather badly. Another local peculiarity is the

[1] "Ex parte boreali juxta tūbam Dnī Odomari de Valenc̄ coītis de penbroke." Sporley, Moñ: Westm̄: *Compilatio brevis &c. &c.*, p. 54, in Brit. Mus. MS. Claud. A. 8.

The epitaph is now lost. There is an admirable woodcut of the pavement in *Gleanings*, p. 96, with a chapter on the mosaic by W. Burges. Canterbury has a pavement of *opus Alexandrinum* in front of the site of Becket's shrine, but it does not conform to the Italian pattern like that at Westminster, and cannot have been laid by Italians. It is illustrated to a large scale in colour by Fowler.

[2] I have heard this called *coccola* by Italian workmen whom I have employed for this kind of work. Burges (*Gleanings*, p. 97) says it is called Lactemusa in Sicily. Other marbles are used occasionally with Porphyry and Serpentino, but these are the principal components of the design always.

The pavement inscriptions

use of brass letters for the inscriptions, let into the marble borders, of which unhappily most have disappeared. The text, however, can be recovered partly from what remains, partly from the casements in the stone, but mainly from the manuscript lives of the Abbots written by the Monk Sporley about 1460[1]. Camden seems to have followed Sporley, but not always exactly[2].

Round the great square within the outer border still remain parts of an inscription in Lombardic letters giving the date 1268 and the names of the king, the abbot, and the artist, in three hexameter lines and a pentameter with needless false prosody :—

✠ XPI : MILLENO : BIS : CENTENO : DUODENO :
CŪ : SEXAGENO : SUBDUCTIS : QUATUOR : ANNO :[3]
TERTIUS : HENRICUS : REX : URBS : ODERICUS : ET : ABBAS :
HOS : COMPEGERE : PORPHIREOS : LAPIDES.

Round the interior quatrefoil of interlacing bands *circulariter scripti* were five hexameter lines

SI LECTOR POSITA PRUDENTER CN̄TA REUOLUAT
HIC FINEM PRIMI MOBILIS INUENIET.
SEPES TRINA CANES ET EQUOS HOIESQ. SŪP ADDAS
CERUOS & CORUOS AQUILAS IMMANIA CETE
MUNDI QDQE SEQŪES PĒUNTIS TRPLICAT ANNOS.

Sporley explains that by these lines "the writer from some fancy of his own, by a triple increase of numbers calculates the end of the world." Thus three hedges stand for three

[1] Sporley, *op. cit.*

[2] Camden, *Reges, Reginae, nobiles &c. in Ecclesia Coll. B. Petri Westmōn sepulti*, 1603.

[3] Lethaby and the plan in *Gleanings* read *subductus*, but the casement in the marble is distinctly I as it should be. In these inscriptions I give the abbreviations as in Sporley's manuscript. It does not follow that they were so in the pavement.

years, a dog's life is thrice as long as that of a hedge, a horse's life thrice that of a dog, a man's thrice that of a horse, a stag's thrice that of a man, and so on till we get the figure 19,683 for the duration of the world.

A third inscription ran round the disc in the middle, *in circuitu unius lapidis rotundi*:—

SPERICUS : ARCHETIPŪ : GLOBUS : HIC : MONSTRAT : MACROCOSMUM, The mosaic pavement

by which, says the Monk Sporley, "we are to learn that this round stone having the four colours of the elements, fire, air, water, earth, represents the Macrocosm or the greater world in which man the Microcosm or lesser world dwells[1]."

An interesting detail is a circle of Arabic interlacing work in the outer border, introducing a touch of that Oriental feeling which runs through so much of the designs in South Italy and Sicily. Similar Arabic traceries occur within circles in the heads of Italian windows. There is one at S. Gemignano[2].

A third peculiarity of this Anglo-Italian floor is the use of glass mosaic in some parts, which Burges says he has seen in no other pavement but that in the semi-Moorish palace of La Ziza at Palermo. It is of course unsuitable for such a position, except in the East where shoes are taken off before entry. Glass mosaic

Glass mosaic, however, as well as marble was brought from Rome by Abbot Ware, for adorning the shrine of Edward the Confessor, together with a mosaicist, The Confessor's shrine

[1] Monstrat, id est declarat in se, macrocosm̄ id est maiorē mn̄dm̄ archetipū id est figuratim̄ principalem, microcosmus enim dicitur minor mundus sz homo, macrocosmus dicitur maior mn̄dus iste videlt in quo nos habitamus.

[2] Illustrated in Anderson's examples, Plates LX, LXXIX.

The Confessor's shrine

Petrus civis Romanus, to work it. This shrine, according to the inscription, of which only parts remain, was not finished till 1280, after the death of Henry III[1].

✠ ANNO : MILLENO : DN̄I : CŪ : SEPTUAGENO :
ET : BIS : CENTENO : CŪ : COMPLETO : QUASI : DENO :
HOC : OPUS : EST : FACTŪ : QUOD : PETRUS : DUXIT : IN : ACTŪ :
ROMANUS : CIVIS : HOMO : CAUSAM : NOSCERE : SI : VIS :
REX : FUIT : HENRICUS : SC̄I : PRESENTIS : AMICUS.

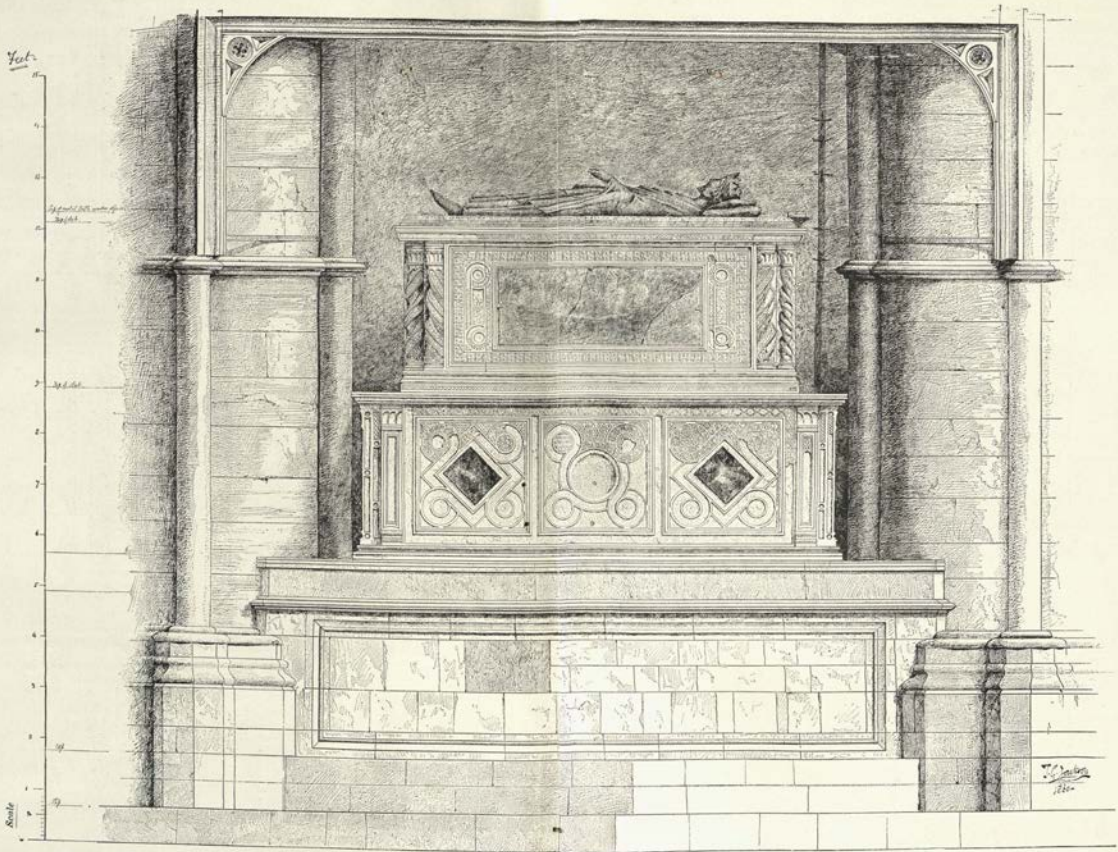
It consisted as was usual of a structure of stone with an altar and retable at the west end, and above was the shrine proper of gold and jewellery, which formed a sort of lid to the receptacle in the stone structure in which the body was laid. This splendid shrine was usually hidden by a wooden covering hung to counterbalancing weights[2]. In 1269 the Confessor's body was solemnly removed to this new shrine, of which illustrations are given in a MS. at Cambridge written for Eleanor, the queen of Henry III[3]. Its extraordinary splendour is mentioned by many travellers. "I saw one day," says Trevisano, an Italian, in 1497, "the tomb of King Edward in the church at Westminster, and truly neither St Martin of Tours, nor anything else that I have seen can be put into any comparison with it[4]." The shrine was destroyed at the Reformation and the body buried elsewhere, but in Sir G. G. Scott's opinion the lower part which still remains was not taken down. At Queen Mary's counter-reformation the body was

[1] Matthew Paris says the gold shrine was ordered by Henry in 1241. *Gleanings*, p. 127, &c.

[2] In Erasmus's colloquy,—*Peregrinatio Religionis ergo*,—is a description of the shrine of S. Thomas at Canterbury. *Auream thecam theca contegit lignea ; ea funibus sublata opes nudat inæstimabiles.*

[3] Two of the illuminations are illustrated in Burges's paper, *Gleanings*, pp. 136–8.

[4] Cited Lethaby, p. 9.



T. G. J. Mens. et Del.

WESTMINSTER ABBEY—Tomb of Henry III

replaced in the present wooden case erected by Abbot Feckenham, who also repaired the lower part with painted plaster to imitate mosaic, and put a painted inscription of his own over the original one, which was worked with dark blue glass on a gold ground. The Confessor's shrine

The shrine is of Purbeck marble slabs on edge, forming three recesses on each side where sick pilgrims suffering from the king's evil could place themselves in hope of the miraculous cure which the saint is said to have effected in his lifetime by his touch[1]. The whole was covered and lined with Roman Peter's glass mosaic, of which little now remains. In the spiral shafts and their inlay, like those in the cloister of S. Giovanni Laterano, and S. Paolo fuori le Mura, and in the quasi-classic entablature we trace the Italian hand; but in the trefoiled heads of the niches, and the tracery panels at their backs we may detect an English motive.

In the time of Edward I there was a fresh importation of Italian work. He was still in Palestine when he heard of his father's death in 1272, shortly after the death of his own son Henry. "God," said he, "may give me more sons, but not another father," and he brought home with him *de partibus Gallicanis* according to the records, but more likely from Italy, the materials for the splendid tomb in which Henry III now reposes on the north side of the Confessor's shrine[2]. It is the first of the long series of royal monuments, Plantagenet and Tudor, and of royal burials in the Abbey which Henry III's tomb

[1] Dean Stanley reminds us of the passage in the *Spectator*, "We were then shown Edward the Confessor's tomb, upon which Sir Roger acquainted us that he was the first who touched for the evil." *Memorials of Westminster Abbey*, p. 112. *Spectator*, No. 329.

[2] Henry was first buried before the high altar in the grave where Edward the Confessor had lain before his translation.

The Coronation chair

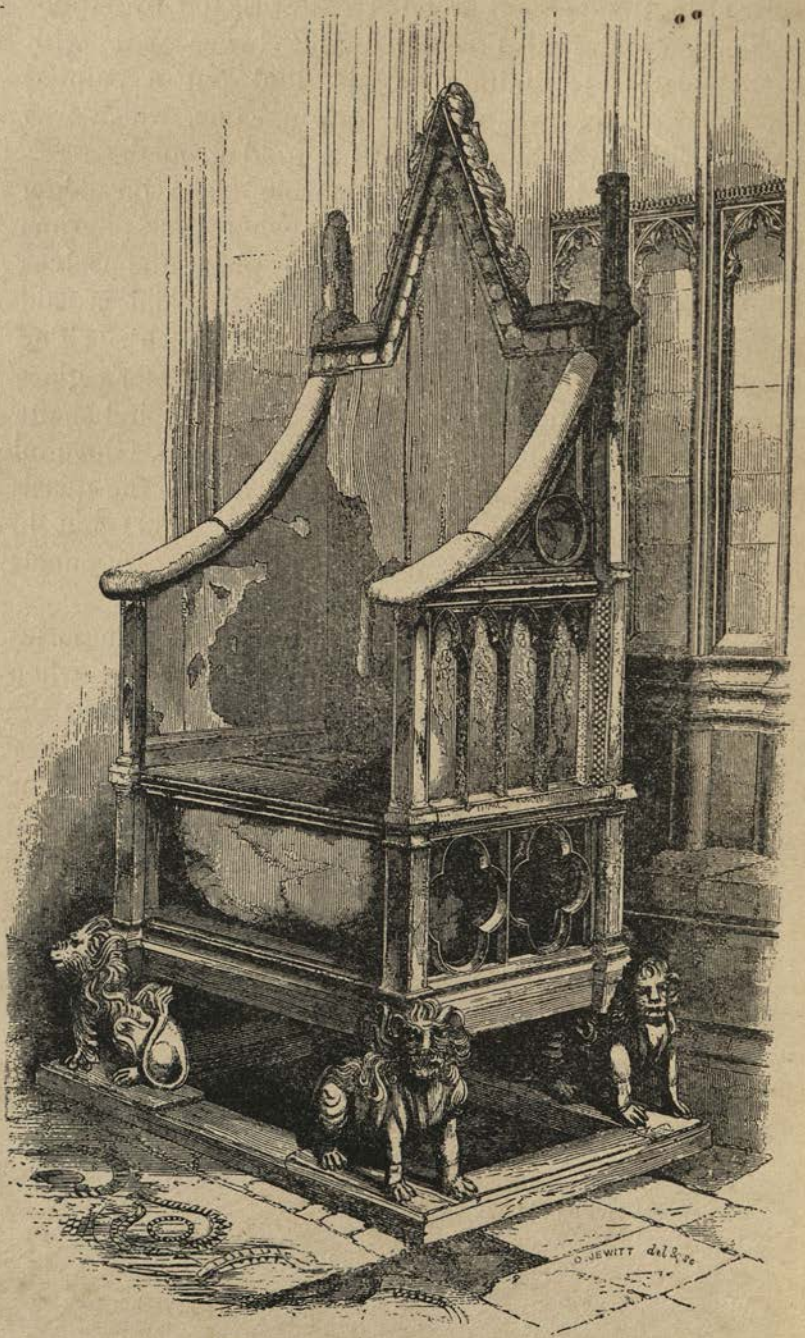


Fig. 102. (From *Gleanings.*)

come down almost to our own time (Plate LXXIX). The lower part of Henry's tomb towards the aisle is part of the podium which supports the raised floor of the Confessor's chapel, and contains a panel, once no doubt painted. Above is a tomb in two storeys of Purbeck marble, with twisted shafts of Italian design like those of the shrine, and on each side are inlaid slabs of Egyptian Porphyry and Serpentino surrounded with glass mosaic in Italian interlacing patterns. From the inner side, and the lower part of the outside, which are within reach, the mosaic has mostly been picked out, but enough remains to make this the most splendid tomb in the Abbey. On the top lies the bronze effigy of the king, diapered and gilt, not a full figure in the round, but flattened at the back in the manner of a high relief. The figure is beautiful, a magnificent convention, for it is difficult to believe that this graceful statue is a portrait, or even a highly idealized representation of the short, stout, ungainly king with the drooping eyelid of whom we are told by a contemporary[1]. The tomb was begun in 1281, and as the Confessor's shrine was not finished till 1280, we may suppose that the mosaics in Henry's tomb are by Peter the Roman, like those on the shrine. The effigy, however, was not finished till 1291. It is the work of Master William Torel, in whom it has been the fashion to detect an Italian Torelli. He is, however, frequently mentioned as William Torel, goldsmith and citizen of London, and there is no reason to suppose he was a foreigner[2]. The figure sculpture of France and England at the end of

Henry III.'s tomb

William Torel

[1] "Erat enim staturae mediocris, compacti corporis, alterius oculi palpebra demissiore, ita ut partem nigritudinis pupillo celaret." This defect was inherited by his son. Rishanger, continuator of Matthew Paris ann. 1273.

[2] See *Gleanings*, p. 153. Lethaby, *op. cit.*

the 13th century was not behind that of Italy, and owed nothing to it.

Queen Eleanor's tomb

Next to this splendid monument is that of Queen Eleanor of Castile, the wife of Edward I, a princess of Romance. Her exquisite bronze effigy, like that of her father-in-law only half in the round, is also by William Torel, one of three which he made for her, the others being at Lincoln and in the Blackfriars, London, where her viscera and her heart were buried. The panel of the lower part towards the aisle was painted by Master Walter of Durham, but there is very little of his work now visible. Above is the splendid grille of wrought ironwork by Master Thomas de Leghtone, which is one of the triumphs of mediaeval smithery. He was paid £12 for it and 20*s.* more for carriage and fixing[1].

The Coronation chair

One more monument of this time may be mentioned. The CORONATION CHAIR (Fig. 102), which contains the fatal stone which Edward brought from Scone, on which Scottish kings had been crowned, and which we are to believe served Jacob for a pillow at Mahanaim. The chair was at first to be made of bronze, and was partly finished in metal before the king altered his mind and paid 100*s.* to Master Walter, the painter, for a chair of wood[2]. The famous stone is under the seat, enclosed within pierced quatrefoils, of which the front piece is lost. The four leopards or lions below are not ancient.

Gesso decoration

The woodwork was covered with gesso, gilt, and pricked with patterns of foliage and diapers, of which

[1] See *Gleanings*, p. 90, and Digby Wyatt's *Metal work.*

[2] "Nunc eadem petra in quadam cathedra de ligno facta per Magistrum Walterum pictorem Regis loco dictae cathedrae quae prius ordinata fuit de cupro." Wardrobe account cited *Gleanings*, p. 122.

T. G. J. WESTMINSTER ABBEY—Gesso decoration on the Coronation Chair

only patches remain. On the back was the figure of a king seated and with his feet on a lion; on the inside of the elbows are patterns of which one is shown in Plate LXXX. The ornament is very indistinct; my full-size drawing was made more than 50 years ago, with the help of a candle, and working on the seat of the chair; the upholstering and varnishing which the chair has undergone for two subsequent coronations may have completed the obliteration of the design. The tracery panels on the outside of the arms may as Burges suggests have been filled with coloured glass on gilt or silver grounds. There is some decoration of that kind in the canopy of the prior's seat in the chapter-house at Canterbury. Though now shabby and ruined the Coronation chair was originally a superb piece of furniture.

The Coronation chair

There are few places where the past comes home to one as it does in Westminster Abbey. To stand in the Confessor's chapel, where splendid tombs in which kings and queens have slept undisturbed for centuries are set round about the Confessor's shrine, is to have all English history brought before one's eyes. No other country has been so fortunate. There is the Imperial group in the Duomo of Palermo, of Henry VI and Constance, and their wondrous son, but the monuments have been shifted about and are not in their proper place. S. Denis may once have rivalled Westminster before the royal dust was scattered and the tombs swept away at the Revolution, but its antiquities are now modern restorations. S. Sophia has many memories but no monuments, and the only place where a few bones of Roman emperors and empresses still lie is the little chapel at Ravenna. No church north of the

Associations at Westminster

Alps can compare with Westminster in the possession of so many royal and historical monuments in which the illustrious dead still repose. Here the returning Stuarts dug up and dishonoured the remains of the Great Protector, whom living they had feared, but it has not generally been our English way to war with the dead, and violate their graves.

West-minster a storehouse of all the arts

It is not only in historical association however that Westminster is supreme. It is unrivalled as a storehouse of various kinds of art. The architecture is the very flower of English Gothic. In the tombs, both early and late, we have the very finest mediaeval craftsmanship in stone, wood, and metal. Abbot Ware's pavement cannot be matched this side of Lucca. The mosaics of Henry III's tomb are as fine as any in Rome. Limoges enamels adorn the monument of his half-brother, Edmund de Valence, and in the wonderful retable now removed to the Jerusalem Chamber we have an almost unique example of early mediaeval painting.

West-minster marks transition of styles

We shall return to Westminster Abbey when we come to the later chapters of English Gothic. Thus far we have been dealing only with the earlier phase, of which Westminster marks the final stage. For Westminster is the last of Early English and the first of Geometrical Decorated buildings. Here we have the first beginnings of window tracery in the choir of Henry III, and from this beginning we follow on steadily to all the subsequent splendour of the Decorated period.

APPENDIX

ON WIDENING REFINEMENTS

ON August 27, 1666, six days before it fell a victim to the great fire of London, Evelyn tells us he went to "S. Paule's" church, where, with Dr Wren, Mr Prat, and others, including the Bishop of London and the Dean, they "went about to survey the generall decays of that ancient and venerable church. ...Finding the maine building to recede outwards, it was the opinion of Mr Chichley and Mr Prat that it had been so built *ab origine*, for an effect in perspective in reguard of the height, but I was with Dr Wren of quite another judgment."

Mr Goodyear, Curator of the Brooklyn Museum in America, has made an interesting study of certain deviations from the upright in mediaeval buildings, which, like Mr Prat, he believes to be intentional. He calls them "widening refinements." He says he finds in a large number of French churches, Amiens and Reims among them, that the piers are upright as high as the capitals whence the aisle vaults spring, but that the walls above diverge, giving with the vault a horse-shoe form to the upper part of the section. He detects similar refinements in S. Mark's and elsewhere in Italy, and in the churches of Constantinople, including S. Sophia.

I have unhappily had so much to do with leaning walls and pillars, certainly not due to refinement, that I can understand the scepticism of Mr Bilson and M. de Lasteyrie, who are not convinced by Mr Goodyear. Of S. Sophia at all events, on which I was asked by the Turkish authorities to make a report, I can testify that there is hardly a wall or a column which is not out of upright, but they certainly were not built so.

Supposing Mr Goodyear to be right, the question arises, why were these refinements made? The object of all other refinements of which we know, many of which we use ourselves, is to defeat some optical illusion. The entasis of a column, the

battering of an angle, the spacing of an intercolumniation, the curvature in the horizontal lines of the Parthenon, all have it for their end to make things look straight and regular which if built really straight and regular would not look so. Now, the curve of a vault meeting an upright wall might conceivably make the wall seem to lean outwards. If this were observable, and were objected to, it might be corrected by making the wall lean a trifle inward. I think it likely that the English architects had something like this in their minds, and practised a refinement when they corbelled out their vaulting shafts above the arcade instead of carrying them down to the ground. On the other hand, to make the wall lean outwards, instead of correcting the optical illusion, would make it worse. The eye naturally expects a wall to be upright, and is distressed if it is not so. Standing not long ago in the nave at Amiens and looking west, without thinking of Mr Goodyear, I was struck by an apparent divergence of the walls, and shortly afterwards I noticed the same thing at Laon. Whether this were intentional or not, it was not agreeable, because it gave an impression of instability. A refinement to correct this would be intelligible: I cannot consider it a refinement to emphasize it. Mr Goodyear seems to have proved by a plumb-line that the divergence is real and not an illusion: it remains for us to explain it. But if there were an illusion Mr Goodyear would have us believe that so far from wishing to correct it the architect would have liked it and sought to exaggerate it.

There are other facts which seem to tell against Mr Goodyear's theory. At Reims he says the inclination is greatest in the middle of the nave, the wall in fact describing a curve. This is exactly what one would expect if the wall had yielded to a thrust from the high vaults. Being held by cross walls at each end, the wall would be weakest in the middle of its length, and most likely to give way there. I have seen many cases of this in my own experience. Again, at Amiens and Paris the tower piers do not conform to the horse-shoe section, but are upright; it is natural to suppose that this is so because the

weight above steadied them. That the question of thrust does come into the matter one gathers from Mr Goodyear's statement that some of the nave columns at Amiens lean in instead of out. Unless there is a defect in foundation this implies that they have yielded to the thrust of the aisle vaults; may it not be that the high vaults have been operative on the upper part of the walls in the opposite direction? (*v.* diagram, Fig. 18, p. 50). At Amiens I noticed many considerable cracks in the nave vault, implying some yielding in the side wall.

Lastly, all hitherto known refinements, having it for their object to correct illusion and make appearance agree with what the eye demands, are not apparent, and can only be detected by careful measurement. But these divergences strike the eye at once, even when one is not looking for them, and, to my taste, they strike disagreeably.

The subject is interesting and will certainly bear discussion. But the inaccuracy in setting out buildings in the Middle Ages is so great and so various that it is difficult to base any theory upon them. I have had to measure a great number of old churches, and have never found them quite regular. Very few towers are rectangular, very few arcades evenly spaced or opposite one another, very few naves or chancels have their sides parallel, very few quadrangles are square, and very few columns are upright.

When Verres wanted to fleece an unfortunate minor in Sicily, whose guardians had satisfactorily carried out the repair of a certain temple for which they were liable, he was at a loss how to manage it, till one of his satellites said, "There is nothing here, Verres, that you can lay hold of, unless perhaps you should require him to make his columns upright." Verres, who knew nothing about such things, asked what was meant by making them upright. He was told that scarcely any column can be really upright, and furnished with this argument he succeeded in his nefarious purpose.

END OF VOLUME I

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